



Town Council of Benoni

ANNUAL REPORT

of the

Medical Officer of
Health

For the Year

1st of July, 1937—30th of June, 1938

• • • •

"THROUGH EDUCATION TO HEALTH"



*Met die Komplimente
van die
Mediese Gesondheidsbeampte.*

PUBLIEKE GESONDHEIDSDEPARTEMENT,
POSBUS 522, BENONI.



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PUBLIC HEALTH COMMITTEE
OF THE
TOWN COUNCIL OF BENONI

1937-1938



Councillor J. H. GREIJBE (Chairman).
Her Worship the Mayor, Councillor Mrs. S. A. HILLS.
Councillor C. L. ADAMS.
Councillor Colonel R. BODLEY.
Councillor T. HEWITT.
Councillor M. NESTADT, M.P.C.
Councillor G. P. VAN ROOYEN.
Councillor G. A. WATT.
Councillor A. H. WEBB.



To His Worship the Mayor,
and Members of the Town Council of Benoni.

Your Worship, Councillor Mrs. Hills, and Gentlemen,

I have the honour to present my second Annual Report dealing with the health and sanitary conditions of Benoni during the year ending on the 30th June, 1938.

These records shew that a steady progress has been made both in the prevention of disease and in the creation of health among citizens of the town, of all races.

With renewed pleasure I would again draw your attention to the work done during this year by the members of the staff of this Department; they have gladly and actively furthered all measures intended to assist the people of Benoni and to improve the health of the town. The staff, without exception, has freely given up its leisure hours, whenever necessary, to achieve the ends which the Department has set out to attain.

I would express my appreciation, also, of the support given to me and to the Department by the members of the Public Health Committee and by the Town Clerk.

I have the honour to be,

Your obedient servant,


C. C. P. ANNING,

Medical Officer of Health.

November, 1938.

TABLE OF CONTENTS.

	Pages
Introduction	7—8
The Day's Work	9—13
REPORT " A "	
i.—Vital Statistics	14—16
Leading Statistics	17
ii.—Meteorological Readings	18—20
iii.—Health Education	20—28
iv.—Physical Education	28
v.—Infectious Diseases	28—33
vi.—The Acute Bowel Infections	33—34
vii.—Tuberculosis	35—37
viii.—Medical Examinations at the Pass Office	38—40
ix.—Venereal Diseases	40—44
x.—Vermin Control	44—46
xi.—Control of Foodstuffs	46—48
xii.—Maternal and Child Welfare	48—50
xiii.—Nutrition and Poverty	50—52
xiv.—Hotels and Boarding Houses	52—53
xv.—Water Supply	53
xvi.—Night Soil and Refuse Removal and Disposal	53
xvii.—Routine Sanitary Work	54
xviii.—Hospital and Out-Patient Services	54
xix.—Other Services	54—55
xx.—Staff	55—57
xxi.—General Matters	57—58
REPORT " B "	
Upon the Housing of the People	58—62
REPORT " C " (Statistical Tables).	
Meteorological Readings	63
Population	64—65
Births	65—66
Deaths	66—71
Infantile Mortality	72—73
Maternal Mortality	74
Lung Tuberculosis	75
Lung Diseases (Non-T.B.)	76
Acute Bowel Infections	77
Enteric Fever	78
Diarrhœa and Enteritis	79
Cancer	80
Measles	81
Cerebro-Spinal Meningitis	82
Violence	83
Notifications of Infectious Disease	84
Removals to Hospitals	84—85
Maternal and Child Welfare: Clinics, etc.	86
Venereal Disease: Clinics	87
Hospital Out-Patients Department	88
Hospital District Midwifery Service	88
Routine Sanitation and Health Inspections	88—89
Municipal Abattoir	90
Foodstuffs Condemned	91
Food Samples for Analysis	92
Prosecutions	93
Licence Applications	94
Rodent Control	95



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INTRODUCTION.

This Report upon the health and sanitary condition of the Municipality of Benoni for the year ending on the 30th of June, 1938, is prepared in compliance with the requirements of the Public Health Act, No. 36 of 1919.

Whereas the previous report had, of necessity, to deal mainly with the laying of plans for the attack upon ill-health in Benoni, this report records the first stages of achievement toward the completion of the plan devised for a full public health service in our town.

The outstanding feature of the year has been the start of our full clinic services for all races, made possible by the appointment of a full-time Assistant Medical Officer of Health. Other advances have been the completion of the training, and the employment, of the first non-European Health Assistants in the Transvaal, and the great enlargement in the scope of health educational work undertaken among the non-European population through the new activities started by these health assistants.

Health education has remained in the forefront of our plan of campaign, and a special feature has been made of the subject of diet and nutrition in the many lectures, demonstrations, pamphlets, broadcast talks, and booklets issued during 1937-1938. A start has been made with a survey of the nutritional state of the citizens, in anticipation of the discovery of evidence which will make our approach to the creation of health among the people more exact and more efficient. Further studies dealing with the climatic conditions of this area and with the incidence of specific infectious diseases are also in hand.

Having completed the housing surveys in the non-European locations, a full survey of European housing conditions has begun, and a preliminary survey of non-European housing in the semi-rural areas completed. Council has been able to make a start with the re-housing of the Native location population, by erecting a first batch of 22 brick houses, and much has been done by the people of the location themselves under the guidance and supervision of this Department to improve the condition of their existing homes.

The services dealing with routine sanitation, vermin control, food supplies, etc., have been consolidated, and are now making good headway, as are the extended services designed to control and to prevent the spread of infectious diseases. The need for an infectious diseases hospital has become increasingly apparent, but it is anticipated that this need will be met during the coming year.

In a year of satisfactory progress it is particularly pleasant to be able to record the increasing spirit of co-operation with the Department displayed by the individual citizens of this growing town. More and more it is found that householders are realising that it is worth while to let the Health Department know at once when they discover defects or nuisances or sickness; this new public confidence in its health department adds greatly to the speed and efficiency with which we are able to assist the town toward the standard of health which all desire.

The statistical evidence now presented in this Report discloses not only the increased amount of work done by the Department but also the improved state of health of the Town as a whole.

The death rate for Europeans, mining Natives, and non-mining Natives has never been so low; the enteric fever incidence continues to fall in a steady decline; the birth rates remain satisfactorily high. These are most satisfactory features in the health history of Benoni, even though they do not outweigh the less pleasant aspects of the high death and sickness rates from preventable disease among location Natives—though even that death rate, which was 37.78 in 1931-1936, and 24.0 in 1936-1937, has fallen to 20.58 deaths per 1,000 non-mining Native population during the current year, remaining, however, more than $2\frac{1}{2}$ times as high as the European death rate.

But a satisfactory start has been made, and there are ample grounds for optimism that before long the progress made in developing Benoni into the most healthful of modern towns will at least equal the progress which our prosperous town has made in other directions.

THE DAY'S WORK

Some citizens may still be unaware of the diverse activities of their Health Department. Some may cynically imagine that sheltering behind its motto of "Through Education to Health," the Department spends much more time in talking about health than it does in actual work among the people. Such citizens are unlikely to read the detailed records of work done which are contained in the later pages of this report.

It may be of interest, therefore, to record some of the varied tasks which come our way during the ordinary round of a normal working day.

The **Abattoir** staff is on the job first; by 7 a.m. animals are being driven in from the pens, slaughtering has started, and the meat inspectors are on their rounds from carcase to carcase ensuring that no meat infected with "measles," tuberculosis, etc., shall be released to the public. The by-product plant has started up, and blood meal for the fertilizers of South Africa, meat meal for poultry feed, and fat for the manufacture of soap is being turned out. The freezing and chilling plants for the preservation of meat are in operation. And so it goes on, until by the end of the day 120 oxen, 170 sheep, 10 calves and 20 pigs have been dealt with and sent out for the consumption of the people of Benoni and all along the East Rand, while 800 lbs. of blood meal, 700 lbs. of meat meal and 100 lbs. of fat have been prepared in the by-product plant.

By 8 a.m. the **Foods Inspector** is at the Market, examining dressed poultry to safeguard the public's supply, examining fruit for signs of decomposition due to bad packing, testing eggs in a special apparatus, and constantly reminding the stall holder of the necessity for cleanliness in floors, surroundings, and the persons of the food-handlers. Next, to tea-rooms, restaurants and hotels — to keep the kitchen workers up to the essential level of cleanliness; into grocers' shops to search for "blown" tinned foods or unprotected foods; into butchers' shops to ensure that all meat exposed for sale bears the Municipal Abattoir stamp—the safeguard of freedom from disease — that the knives and chopping blocks are in clean condition, and that flies and dirt are absent. A round of the Kaffir Eating-houses, then out to a dairy or two, arriving during the milking hours, to supervise the sterilization of cans and bottles, the temperature of the milk coming away from the cooling machine, the purity of the water supply for sluicing down the milk shed and for the washing of udders before milking; and a score of other details discussed with the milk producer to aid him in his full-time task of sending out a clean, safe and ample supply of milk to the public. Back again to the office

to prepare the daily report sheet and to get ready the sample bottles and equipment necessary for an early start next morning when he will be taking samples of milk for chemical analysis, perhaps as early as 4 a.m.

The **District Inspectors** have started their day by discussing with the Medical Officer of Health their work of the previous day — where further personal visits have to be paid to abate nuisances, where notices must be served, where a prosecution is becoming unavoidable. There are owners and occupiers to be seen by appointment in the office, too, before the inspectors can get away to their outside tasks.

The **Outside Areas Inspector** sets off in his car. A first call at an old mine compound where flies have been prevalent, a discussion with the compound manager on the more efficient disposal of refuse, and then on to the smallholdings where he is completing a survey of the wells, the pit closets, the disposal of household refuse, the dwellings and their outbuildings. So little has been done by the Department in these areas in the past that the inspector is extremely busy calling for the demolition of insanitary shacks, advising on the drawing up of new building plans, and teaching the people how to make the best, hygienically, of their surroundings.

Meanwhile the two inspectors on routine work in the Township and suburbs are on their daily rounds. One deals especially with the housing survey, but both find much time occupied in constantly reminding householders that cleanliness pays. Here is one of the last of the old and filthy built-in brick refuse middens, harbouring the dirt and smells of ages; an urgent visit to the owner is necessary to make sure that he will delay its demolition no longer. Here is a large drum, lid-less, buzzing with flies, wet, smelly and crammed with refuse of every sort, hidden away in a corner of the yard; a word to the housewife suggesting that much of the refuse could be burned in the kitchen stove, and that an approved bin should be purchased, kept close to the kitchen door, under observation and continually covered. At the next house the housewife grumbles—"that drain is choked and the owner will not clean it; if you don't make him do it I shall write to the Medical Officer of Health." Yet, with the aid of a stick, the inspector removes several rags, papers, a kitchen towel, a tea-spoon and a cruet, and the drain is once again in working order. It takes a long time to teach some householders to help themselves—even to use a little soap and water and some elbow-grease to remove dirt from their homes.

Here is a clutch of dilapidated out-buildings in the back yard, littered with old junk, boxes, bottles, bits of iron, an old bath, and almost everything else except the kitchen stove. Pull them away and the scurry of disturbed mice shows what harbourage such collections provide for rodents,

while standing water in old tins, tyre covers, broken bottles and uncovered water tanks too frequently in the summer contains unnecessary mosquito larvae. The housing of fowls and Native servants, too, give the inspectors much to do. Here is an unpaved fowl run, stinking, flea-infested, obviously uncleaned for months past. Here is a householder, even in this year of grace and of health education, content to consider four old iron walls and a leaking roof sufficient covering for the Natives who work in his kitchen, who expresses irritation when the Department calls for new brick Native quarters with ablution facilities, and when the inspector asks that the boarded windows be opened and the room cleaned down, with all the contents brought out into the sun, at least once a week. Sanitary passages littered with refuse (out of sight and out of mind); defective eaves guttering leading to dampness of the house; lack of sub-floor ventilation leading to rotting floors; over-crowding of tiny houses when a room has been sub-let to another family "just for a few days while they are up from the platteland"—these are a few of the daily troubles of the inspectors. Yet, generally speaking, they get a smile and a welcome from most of the householders, who are as anxious to learn and to make the best of their surroundings as the inspectors are eager to help them.

The inspector who deals with **infectious disease and vermin** has gone out with a batch of notifications; one is of a case of suspected enteric fever, just notified by a doctor who asks the Department to arrange the removal of the patient to hospital. The ambulance is ordered, the risks of spread of infection are carefully explained to the occupants, oral vaccine is given to the head of the family for all contacts, all bedding, clothing, etc., is removed for disinfection, and a full report on the source of infection is prepared. Similarly with measles and whooping cough cases—usually nursed at home. The necessary precautions to prevent the spread of the disease are explained, a printed note of explanation is left behind, the length of quarantine for susceptible contacts is detailed, and the principal of the school at which the contacts attend is duly notified.

Next he does a round of stables and pig-styes to see that all manure is being removed regularly, that the fly traps are working properly, that skins and horns from the Abattoir are dealt with adequately; in fact, that all the precautions necessary to prevent fly-breeding are carried out. Then to three houses where licensed fumigators are killing bugs with cyanide gas. The efficient sealing of all openings is to be checked, the locking of all doors, the display of clear "Danger" notices, while the occupiers have to be advised of the precautions to be taken when the premises are re-entered. Finally, an inspection of premises in which complaints have been made that bugs are present, so that those responsible may be called upon to have the place fumigated.

The **rat-catcher** is out with a gang of Natives, trained in this work, on the outskirts of the Municipal area gassing and poisoning veld rodents living in burrows in this sparsely populated area. Such rodents—gerbilles, and the like—would convey plague infection to our town rodents were the infection brought from other rural areas; therefore his work in reducing the veld rodent population is important. In the town again he inspects premises for evidence of rat infestation of dwellings, and destroys house rats by gassing, trapping and poisoning. But his most significant work is done in the rendering of premises rat-proof, and in removing rat-harbourages, and rat-attractive foodstuffs from town dwellings and business stands. It is his task to keep the rat on the run, giving it no place in which to breed or feed. His work also includes the eradication of the nests of white ants on properties where these insects are causing damage to dwellings, the discovery of places where mosquitoes may hatch and the destruction of these irritating insects while they are still in the larval stage.

The **Location Inspector** spends the greater part of his day in trying to alleviate the environmental conditions under which the Location residents live. A Native comes to him with a piece of paper on which are drawn a few irregular lines, and states that he wishes to erect a dwelling according to the plan submitted; the sizes of the rooms are not shown nor, on questioning, has the Native much idea of the size he wants; the main point he wants to ensure in his dwelling is that there shall be external doors in as many rooms as possible, and as few internal doors as possible. The inspector's first task is to draw the building plan and, in the months to come, to supervise its building. He leaves his office to make war upon dirt in a Location where water runs only from stand pipes in the streets, and upon flies which so many Natives look upon as harmless little insects. There is a pile of manure on one stand; the Native owner refuses to believe that flies are breeding in the manure and, when asked why the fowls are so busy scratching there, replies "no flies breed there; the fowls only scratch for the white maggots you always find in manure." Under existing circumstances it is impossible for anyone to keep animals under sanitary conditions in the Location, and the inspector has continually to be supervising these rough and ready stables; in between visits to over-crowded rooms, ripe in every sense for demolition; to the open depositing sites which become scavenging pits for the wandering animals; and to Natives suffering with infectious disease who are still reluctant to go to hospital — remaining firm in their superstitious belief that the sickness is only the result of an enemy's evil eye. The health assistants follow up his visit and gradually the fear of hospital dies and an understanding of the sickness dawns in the light of the explanation given in the patient's own tongue and by someone who once thought of disease from the same angle.

The **two health visitors** are out on their daily visits to the infants, the expectant mothers and the nursing mothers in their homes. They are in the midst of domestic troubles at every turn but the welcome they receive is a personal one and has none of the antagonism which officials so often receive. Here is one family, with three little children; the income is £6 a month and the diet is mainly of starch. The children had the sore eyes, the dry, poor skin of the under-nourished, but the green vegetables, the milk, and the diet advice given by the health visitor is gradually bringing those children back to health. Here is an unmarried mother, 17 years old, living where conditions are made unbearable for her and her child in the home of her father and step-mother; she is suffering with syphilis. Treatment at the clinic is easily arranged, but the health visitor has a harder task ahead in arranging for the upbringing of the child while mother works. Here is an expectant mother quite unable to provide clothes for the coming infant; could not, the health visitors say, the more fortunate mothers of the town pass on their disused baby clothes to them for distribution among such needy cases? But the greater part of the day's work is not spent in distributing benevolence. There are mothers to advise about the hygiene of motherhood, there are mothers with overlarge families which they cannot support to be brought to the Race Welfare Clinic, there are expectant mothers to bring to the Ante-Natal Clinic and to the District midwives—and babies to weigh and mothers to advise at the Infant clinics—white, black and coloured. There are Native infant problems to be solved with the aid of the Native nurse, there is every infantile death to be investigated, every midwife in the area to be supervised, each nursing home, each shop where female workers are employed, to be visited. Truly, the health visitors find much to do and little time to do it in.

Meanwhile the Assistant Medical Officer of Health is examining Natives at the Pass Office, attending at the many ante-natal, infant welfare, venereal disease and tuberculosis clinics for all races, treating the sick in the Municipal Compound, supervising the health education talks which the health assistants are giving in the schools and homes of the non-European population, lecturing himself to groups of mothers, ambulance workers, etc., and doing, with the Medical Officer of Health, the hundred and one tasks of administration which crop up afresh from day to day.

All these details give no more than an incomplete section through the routine daily picture of the work of the Department. At least they may suggest to the reader that the Medical Officer of Health's staff is practically and actively engaged in the task of creating health, preventing sickness and alleviating distress among the people of this town of Benoni.

REPORT "A"

I.—VITAL STATISTICS.

1.—POPULATION (Pages 64, 65).

The population figures, for European, Coloured, Indian, and non-mining Native residents are those estimated on previous census figures by the Union Department of Census and Statistics. The figures for mining Natives—male Natives employed by, and resident in the mine compounds of the six gold mines in the Municipal area—have been checked locally during the year.

European, Coloured and Indian age groupings vary only slightly from those given in detail in the last report. Unfortunately the only available age grouping returns for the Native population have not been sub-divided as yet into mining Natives and non-mining Natives. Since the former comprises so clearly defined an occupational entity, within certain general age groups, it is not considered that any good purpose would be served by including this table until detailed age-groupings are available from the Census Department.

A significant alteration has been made in the Native statistical returns in this, as compared with the last report. It has been considered advisable to isolate the male mine Natives who are resident in mine compounds in one group, and to exclude from this group all male and female Natives who are resident on mine properties but outside mine compounds, since the latter are generally living under conditions similar to those obtaining in the Locations. The Native population is divided, therefore, for the purpose of this and future reports, into two groups:—(1) Mining Natives—including only males resident in mine compounds; (2) Non-mining Natives — including all other Natives within the Municipal area. In the "Non-mining Natives" group are now included some 2,477 males and 1,345 females living on mine properties who, last year, were included in the general group of "Mine Natives." A few of these males are, actually, engaged in mining, but most of them are engaged in brick-making, stone crushing, agricultural or domestic labour.

The total estimated increase in population, as compared with the 1936-1937 figures, is 3,228. Of this increase, 1,429 is credited to Europeans, mainly resident in the semi-rural areas; 120 to Coloureds; 61 to Indians; and 1,618 among all Natives. The estimated population of Benoni is now 80,988.

2.—BIRTHS (Pages 65, 66).

The European birth rate fell from 26.91 in 1936-1937 to 24.49; the current figure compares favourably with the rate of 22.43 for the years 1931—1936. Among Europeans, male

births outnumbered female in the proportion of 116 to 100. The European illegitimacy rate fell to the low figure of 1.09 illegitimate births in every 100 births.

The Native births, once again, were incompletely registered and the birth rate figure for Natives is consequently of little or no significance. The Coloured (39.1) and Indian (46.1) birth rates remained as high as usual.

3.—DEATHS (Pages 66—72).

Death rates continue to fall—the European death rate, which was 8.92 in 1931-1936. 8.4 in 1936-1937, now reaches the lowest rate yet recorded—7.60 deaths per 1,000 population. The mining Native death rate, in spite of a high proportion of deaths due to mine accidents, is only 6.42; but it must be remembered that this group includes almost entirely young men of picked physical calibre.

Among non-mining Natives, living in the locations, etc., there is a most satisfactory further decrease—from 37.78 in 1931-1936, to 24.00 in 1936-1937 to 20.58 this year.

The following death rates shew the improvements which have been recorded since organised health work was undertaken in this area, as regards the reduction in the number of fatal terminations to preventable diseases among all races:—

	Deaths per 1,000 Population		
	1931-36	1936-37	1937-38
1. Lung diseases (non-TB)	4.31	3.17	3.32
2. Diarrhoea & Enteritis (under 2)	2.57	1.35	1.70
3. Other infectious diseases	1.29	0.79	0.60
4. Violence	1.21	1.10	1.13
5. Infancy & Cong. Malformations	1.18	1.10	0.91
6. Disease of Heart	0.91	0.69	0.81
7. Tuberculosis (all forms)	0.80	0.84	0.60
8. Enteric Fever	0.79	0.32	0.27
9. Cancer	0.28	0.31	0.22

From these figures it will be seen that in spite of the steady improvement in total death rates, the same advance has not occurred in the reduction of deaths due to lung diseases (non-TB) and to enteritis in infants. There seems to be little doubt, in the light of evidence collected and reported elsewhere, that this high fatality rate is associated with under-nourishment, and, perhaps, syphilis.

Violence remains far too frequent as a cause of death, being responsible for one out of 11 European deaths, one out of every four deaths among mining Natives, one out of every 32 non-mining Native deaths, and one out of every nine deaths among all races. While mine accidents (see page 83)

are responsible for more than half the total deaths due to violence, and for three-quarters of the deaths due to violence among mining Natives, the toll of death still includes 18 deaths due to road and rail accidents, four to other accidents such as falls, etc., two to electricity, two to accidental drowning, two to accidental poisoning, and eight to burns. It becomes apparent that an increasing attention to "safety first" measures on the road, at work, and in the home is necessary if this wastage of young life is to be prevented.

4.—INFANTILE MORTALITY (Pages 72, 73).

The European infant death rate has risen to 65.3 deaths per 1,000 births, as compared with 54.7 last year, and 68.0 in 1931-1936. With the arrival of our organised attack, through clinics, home visiting, etc., as from the 1st of April, there is reason to hope that the wastage of infant life will be reduced in future years. The ante-natal clinics should help to reduce the number of deaths due to premature births, and the attention which is now being paid to the nutrition of the expectant mother should also lead to the same end.

The Native infantile mortality rate of 668 deaths per 1,000 births is fallacious, owing to the inadequate registration of Native births—a difficulty which has still to be overcome. But the rate is undoubtedly high, probably in the neighbourhood of 300, and the fact that 44% of these Native infantile deaths are due to the dirt-borne disease, enteritis, and another 26% to bronchitis and pneumonia, clearly shews the line along which our work must proceed. The new clinic service, supported by adequate home visiting, intensive communal and individual health education, will proceed hand in hand with the work already started to improve housing conditions, food supplies, and the nutrition of the people. Future reports will shew what success is achieved.

MUNICIPALITY OF BENONI

LEADING STATISTICS

Year ending on the 30th June, 1938.

	ALL RACES.	EURO- PEAN.	MINING NATIVES.	NON- MINING NATIVES.	COLOUR- ED.	INDIAN.
POPULATION	80,988	22,500	33,650	21,822	1,996	1,020
Birth Rate	(12·4)	24·49	—	(14·9)	39·1	46·1
Illegitimacy Rate	12·5%	1·09%	—	30·8%	24·4%	0·0%
Death Rate	11·09	7·60	6·42	20·58	18·04	25·49
Infant Mortality Rate	—	65·3	—	(668)	128·2	212·8
Maternal Mortality Rate	—	0·0	—	(12·3)	0·0	21·5
DEATH RATES (various) :						
Lung Disease (non- TB)	3·32	6·82	2·29	6·05	5·51	8·82
Enteritis (under 2)	1·70	0·22	—	5·82	1·50	2·94
Violence	1·13	0·65	1·70	0·64	2·00	1·96
Disease of Heart	0·81	1·19	0·33	1·10	1·50	0·98
Enteric Fever ...	0·27	0·13	0·33	0·37	—	—
Pulm. Tuberculosis	0·53	0·04	0·18	1·28	2·00	2·94
Cancer	0·22	0·53	0·03	0·09	1·00	0·98
INFECTIOUS DISEASE INCIDENCE RATES :						
Enteric Fever ...	0·82	0·62	0·89	1·05	—	—
Pulm. Tuberculosis	1·27	0·27	1·54	1·83	2·00	0·98
Scarlet Fever ...	0·17	0·62	—	—	—	—
C.S. Meningitis ...	0·39	0·31	0·62	0·14	0·50	—
Erysipelas	0·26	0·49	0·24	0·09	—	—
Measles	4·71	8·97	4·16	1·47	4·01	0·98

All returns are corrected for outward transfers; also for inward transfers for Benoni residents dying in the Benoni-Boksburg Hospital.

Native birth and infantile mortality rates are unreliable owing to incomplete registration of births.

All returns, except illegitimacy rates, are expressed per 1,000 living population, or, in the case of infantile mortality rates, per 1,000 live births.

II.—METEOROLOGICAL READINGS

(Page 63)

For the first time it is possible to give readings from the Department's Meteorological Station (Union 8/1682) at the Municipal Compound. The equipment has been increased and now includes maximum and minimum thermometers, dry and wet bulb hygrometers, barometer, barograph, hygrothermograph, grass thermometer, sunshine recorder, and rain gauge. Observations are made and the readings of all instruments recorded daily at 8.30 a.m.; when necessary, readings are again taken at 3 p.m. and instruments re-set at 6 p.m.

Each morning the readings are posted at the entrance to the Municipal Offices, for the information of the general public and of the schools. Senior students at the Brandwag School have been instructed in the working of the instruments and the significance of the readings, while members of the public have frequently visited the only "A" class meteorological station run by a municipality in the Transvaal.

The year started with an unusually cold July, when the mean daily minimum was 32.9° as compared with 39.2° over the period 1932-1937. Until October the daily temperatures were slightly lower than usual. But November, with a mean daily maximum of 82.4° ($75.2^{\circ} = 1932-1937$), was unusually warm. This early heat coincided with the start of the annual fly-breeding season, and was one of the factors causing the high bowel infection death rate experienced during that month. From December onwards the atmospheric temperatures remained steadily within a degree or so of the normal for the past five years, until in March the temperatures began to display a higher trend than usual and the early winter was milder.

The year's rainfall was erratic. Only 23.06 inches fell (26.50: average, 1931-1937), and more than half of this rain fell in December (8.22ins.) and in April (4.85ins.) There was no rain in July and August, and hardly any in May and June. During the whole year rain fell on 80 days, including 22 days in December, 11 in January, eight in February, and nine in April. During the "Winter" months of July-August and May-June (inclusive) only 0.56 inches of rain fell on seven days.

Sunshine was recorded at the station from the 1st of January, and the findings offer ample proof of the popular conception of "sunny" South Africa. It is interesting to compare Benoni's daily average of 7.9 hours of sunshine over the six months with a daily average of 2.98 hours in Glasgow, 3.95 in Harrogate, 5.3 in Guernsey, or 7.3 on the Mediterranean seaboard. With a daily average over the year of about

4/10ths of the sky surface covered with cloud, conditions may be compared with those experienced on the Californian coast where the cloud reading is the same as that in Benoni, and contrasted most favourably with the north of England where 8/10ths of the sky is daily covered with clouds which keep back the health-giving rays of the sun from the earth.

The wind records show that on 145 days there was calm, and on the 225 days when wind was registered it came from the north on 43% of the days, 19% from the north-east, 15% from the east, 8% from the south-east, 2% from the south, 1% from the south-west, 2% from the west, and 10% from the north-west. Therefore, 72% of all winds came from a northerly direction, i.e., over the highlands of the Northern Transvaal and the Rhodesias from the tropical belt. Few winds came from the Atlantic coast or from the Cape, but winds from the Indian Ocean over the hills of Zululand were not uncommon.

Generally speaking, the climate of Benoni is that of a temperate continental region—warm in summer, cold in winter, with a rainfall never excessive and occurring mainly in the late spring and the summer. Apart from the ground conditions which approach a state of drought during the winter, it would appear, at first sight, that in the bracing climate of Benoni are to be found most of the climatic factors conducive to healthy life.

That, indeed, is probably true. But when we delve more deeply into the response of the individual to the various environmental factors, like food, temperature, light and radiation, humidity, dusts, atmospheric pressure and winds, our present lack of exact knowledge becomes apparent. Were such exact knowledge available it is likely that we could do much more to create health among the people and to advise them how best to prevent ill-health and disease.

A mass of valuable information has gradually been collected in other parts of the world regarding the effect of climate upon health. Without detailed local meteorological records we cannot start to apply that information to conditions in Benoni. For instance, it has been found possible in Britain to define a critical temperature point (taken 4 feet down in the earth) below which there occurs a rise in deaths from lung diseases; it has been shewn that when the earth temperature rises to 56°F. then deaths from diarrhœa and enteritis begin to occur. Scientists have shown that premature babies over-exposed to sun develop a rise of body temperature followed within a few hours by diarrhœa and vomiting, and we have reasons to believe that there may often be a combined influence of temperature and infection upon the production of epidemic diarrhœa. It is known that in the Punjab there is a much higher pneumonia mortality rate than in other parts of India, and this is attributed to the much greater diurnal range of variation of atmospheric temperatures, such as we experience in Benoni, with a cor-

responding liability to chill. It is known that there is a seasonal variation in the rate and volume of respiration, namely that respiration is deeper and less rapid in summer, shallower and more rapid in winter; and that the winter respiration rate taxes the heart, so that deaths from heart disease are more frequent in the elderly in winter—an effect upon the heart accentuated by the rise of blood pressure caused by contraction of the skin arterioles under the influence of cold. Something is known to-day, also, about the local action of cold upon the mucous membranes—that the alternate exposure to over-heated atmospheres, which produce a congestion of the nasal lining membranes, followed by exposure to cold air is a powerful factor in producing a local susceptibility to catarrhs, and that such influences undoubtedly predispose the human “carriers” of germs (like those causing pneumonia and cerebro-spinal fever) to an acute attack, and these sufferers serve as foci from which infection spreads to others. We have some knowledge, too, about the harmful and beneficial effect of exposure of the skin to sunlight, and we begin to know a little about the unhealthiness of “hot-house” conditions in crowded and unventilated rooms where temperature and humidity are abnormally high and the air does not move freely.

Because exact local information is needed about these and other factors affecting the health of the people, no apology is necessary for placing our meteorological station in the forefront of our activities—it is a most significant link in the chain of our local research into health and disease. The more experience we gain of health and disease the more forcibly we are reminded that man’s health and happiness depends primarily upon the efficiency with which he can adapt his body to his environment. Among the most significant of those environmental factors are the ones which we call climate. Therefore it is claimed that although the daily records painstakingly kept at the meteorological station may not seem at the moment to be of great practical value, with each succeeding year they will be of increasing value as it becomes possible to co-relate their variations with variations observed in the health of the people—both as individuals and groups.

III.—HEALTH EDUCATION.

Under this heading is included some of the most important work done by the Department, which has as its motto “Through Education to Health.”

With the development of full clinic services, individual education at the clinics has become possible to an extended degree. Meanwhile, the health inspectors, health visitors,

and health assistants have continued to spread health information among the people during their daily contacts in the houses and work places of the town.

As the result of the propaganda released last year, a general interest in health matters has been aroused and the Department has become the centre to which the people of Benoni naturally turn when they want advice regarding personal and community health.

No Health Week was held during the year because the activities of the Department in this respect were concentrated upon the exhibit staged at the S.A. Health Congress Exhibition in Johannesburg.

1.—NON-EUROPEAN HEALTH ASSISTANTS

The course of training, generously provided at the location by Council, which started last year was concluded on the 5th September after five months of intensive instruction of an essentially practical nature.

The main object of the course was to train intelligent Bantu and Eurafrican males in the simple groundwork of public health theory and practice so that they might, in the light of their newly-formed knowledge, teach the rules of health and of the prevention of disease to their superstitious and ignorant fellows; and that they might, under white supervision, act as health assistants in the work of the Municipality in controlling the spread of tuberculosis, venereal and other infectious disease.

The final examination was set, the answers corrected and the oral examination held by Dr. H. S. Gear of the Union Health Department, who was deputed for this work by the Secretary for Public Health. Dr. Gear reported that seven out of the 11 students had obtained 60% or more of the possible marks and had, therefore, passed the examination.

On the 11th of April, Dr. A. J. Orenstein, C.M.G., presented certificates to the seven successful candidates. Each certificate states that the candidate—

“Attended a full-time course of training held by the Town Council of Benoni from May to September, 1937. Instruction was given to him in the theory and practice of elementary hygiene and sanitation, in the prevention of the spread of disease, in the improvement of the environment of his fellows and in their education regarding matters relating to disease and health. Further that he did, on the 6th and 8th of September, 1937, satisfy the examiners in a written and oral examination in these subjects and was considered by them to be competent to carry out the duties of a non-European Health Assistant.”

At the presentation ceremony, in the presence of Her Worship the Mayor, the Director of Native Labour, Witwatersrand, the Native Commissioner, Benoni, and many

others, Dr. Orenstein congratulated the Town Council on being the first Municipality in South Africa to follow Pietermaritzburg's example of training non-Europeans in health work, and expressed his especial pleasure that something was being done by the Natives for the Natives. He reminded the students that public health is a live science, that they must always be learning, and that their task will be, as officials, not to prosecute or to persecute the people but to help and to advise them. The Hon. J. H. Hofmeyr, Minister of Mines, Education, Labour and Social Welfare, sent a message of congratulation to the students in the course of which he said:—

“I am very glad that this avenue of useful employment is being opened up for non-Europeans, and I hope that those who have been trained will be very successful in spreading sound health knowledge among their own people. Undoubtedly there are few lines along which educated non-Europeans can more effectively serve the community than this.”

In a message from the Hon. R. Stuttaford, the Minister of Health, said that “the line of approach attempted in Natal and later in Benoni by utilising the service of properly instructed non-European health assistants offers the best solution of spreading the gospel of health to people of their own race.”

Council appointed the three most successful of the students as full-time health assistants in the Department in November. In these new posts it is the duty of the assistants to work in the clinics, to assist the location health inspectors with routine sanitation activities, to be health educators in the location homes and schools, to follow up and to gain the confidence of all non-Europeans suffering with infectious disease and the contacts of such cases. To these men has fallen the pioneer task of doing the essential spade work in laying the foundations and erecting the structure of a healthy and health-conscious non-European population in Benoni. The success which they have had during the first eight months of appointment has proved the wisdom of Council's action in training and in employing such workers. Benoni has blazed a trail into the dark forest of urban Bantu ill-health which will, in course of time, lead to the sunny open spaces in which no disease germs can live. Guides who, having learned the paths out of the darkness, have been given the opportunity to prove that they can lead their people into the promised land of health. More assistance from the Municipality will be needed in clearing away the present undergrowth of slum dwellings and foul environment, and in the re-planning of well spaced and healthy homes, but it remains, finally, for the Bantu to shew that they can help themselves.

Of the other four successful students, one was temporarily employed by the Department as assistant rat catcher, one returned to Alexandra Township as a health assistant, one to his duties in the Pretoria Municipal clinics, and the other was employed by the Germiston Health Department. Several requests have been received from other Health Departments for trained men of this type; it is hoped, now that a demand has been created, Government will not delay in making similar courses of training available elsewhere for educated non-Europeans.

2.—TRAINING OF HEALTH INSPECTORS

The brief, though intensive, course of training for health assistants — lasting only five months — was never intended to be more than a half-way house toward the ultimate goal of trained educated non-Europeans in the full course for the Health (Sanitary) Inspectors' certificate of the Royal Sanitary Institute. Very few non-Europeans in South Africa, even with the preliminary scholastic qualification of matriculation or junior certificate, have the necessary background or general education which is necessary for a successful plunge into the course of training for the full certificate. A stepping stone, of the nature of the health assistants' course, is essential.

But an increasing demand arises for the full course. This is due, in part, to the success in December of a Zulu health assistant, lately of Pietermaritzburg and now on the staff of the Alexandra Township Health Committee, who passed the Royal Sanitary Institute examination and thereby became the first non-European in the Union to be qualified as a health (sanitary) inspector.

To meet this demand, and since no further courses for health assistants were in sight at the time, the Department approached the Witwatersrand Technical College and a course started at the location clinic in May with 22 students. Held in the evenings, lasting for two years, the course is the same in all respects as that provided for Europeans. The students include the Municipal health assistants, school teachers, clerks and messengers who have enrolled at their own expense. Men who know that there is no guarantee of employment even when they have obtained the certificate, but who are imbued with the rising non-European interest in organised health control work and feel that, if they can prove their efficiency, scope for their future employment will arise.

It remains to be seen if men who have not had the preliminary technical training given to health assistants, and whose home conditions and daily life are not conducive to regular study, will be able to pass the examination. Theirs is a brave endeavour, and it deserves full support. There is

a great need in this country for Natives trained in the preventive aspects of the war against disease; a need as great, if not greater, than there is for Natives trained in curative work.

3.—BROADCAST HEALTH TALKS

The South African Broadcasting Corporation again provided facilities at the Johannesburg Studio for the Medical Officer of Health to give a series of 24 talks; this time under the general title of "Health Travel Talks," a popular series of accounts of wanderings round the world under such titles as "A Bowl of Rice," "Dinner in Detroit," "A Red Square Meal," "Death round the Corner," etc., into each of which was worked a topic dealing with health and disease.

4.—POSTERS AND PAMPHLETS

Among the many releases during the year were included pamphlets, in both official languages, on "Syphilis," "Gonorrhoea," "Tuberculosis" (in conjunction with the Witwatersrand Anti-Tuberculosis Council), "Mosquito Control," and "Flies."

In March a brochure was issued with the title "What your Health Department will do for You." A copy was sent, personally addressed, to every householder in Benoni. It contained a clear statement of the services—clinic, sanitation, midwifery, treatment, etc.—available to all citizens, and it certainly helped very greatly to make the Department better known and more freely used by the citizens.

In October a poster, "Kill that Fly!" was displayed throughout the town. Under a large drawing of a fly stood out the words—"Be careless now, and this is what may happen! October 10, two flies; October 20, 152 flies; November 20, 34,302 flies; December 20, 72,280,000 flies; January 20, 5,746,670,500 flies."

5.—LIAISON WITH MEDICAL PRACTITIONERS

Arising out of a discussion between Health Officers and General Practitioners at the Far East Rand Division of the Medical Association of South Africa, closer co-operation between this Department and the local doctors has been achieved by sending out to each doctor every Monday a note on all cases of infectious disease reported in the area during the previous week, together with general notes on any matters of topical public health interest, such as diphtheria immunisation, enteric fever incidence, smallpox precautions, the work at the clinics, etc.

6.—FIRST-AID: TRAINING OF MUNICIPAL NATIVE EMPLOYEES

A further batch of 11 Natives received training in the course of first-aid work laid down by the S.A. Red Cross Society. 24 trained Natives are now kept regularly efficient throughout the service, and receive a bonus of 2/6 a month while remaining efficient.

7.—REFERENCE LIBRARY

A suitable library is gradually being built up in the Department. It includes standard works on all public health subjects, bound copies of many of the leading public health journals, the reports of the League of Nations Health Organisation, and, through the generosity of various health organisations in Britain and the United States, an interesting series of current health literature.

8.—NUTRITION

Food surveys undertaken in Benoni (page 51) provided evidence that ignorance regarding the diet necessary for health might be a significant local cause of public ill-health. The Department set to work, therefore, to provide exact information on diet and nutrition to those residents who were interested. With the active assistance of the Benoni branch of the National Council of Women a series of 12 weekly lectures and demonstrations was arranged in the Supper Room during October, November and December. An average of 120 persons attending each lecture was maintained throughout the series, and great interest was aroused. The lectures were given by the Medical Officer of Health, and Miss Mary Higham in the concluding demonstrations showed how the theory proposed in the lectures could be carried out in practice. Among those who regularly attended the course were social workers who are in continual touch with the poorer and more ignorant classes in the town. To illustrate the lectures, exhibits were staged of dishes made with milk, types of bread on the market, the various cuts of meat available, etc.

Arising out of these lectures, a booklet entitled "Food Facts and Daily Diets" was prepared by the Medical Officer of Health and Miss Mary Higham. 3,000 copies, in English and Afrikaans, were printed and distributed to Benoni residents; a certain number were distributed at Benoni's "Nutrition" stand at the Health Exhibition held in the Selborne Hall, Johannesburg, during February. On this stand were displayed, in pictorial and actual form, the foods and amount of foods necessary in a daily diet essential for health. The S.A. Red Cross Society made a request that they might use the "Food Facts and Daily Diets" booklet as a part of their educational material, and in due course reprinted 5,000 copies for distribution throughout South Africa. A further reprinting of 10,000 copies by the Society is in progress.

The various chapters in the booklet were also made the subject of a series of weekly talks to the scholars at the Benoni High School and at the Benoni West School.

To further the consumption of vegetables among the Native and Coloured population resident in the locations, Council agreed to provide free vegetable seed and manure to those residents who would grow vegetables on their stands. At meetings with the Native Advisory Board the necessity for vegetables in the daily diet was explained and the Native co-operation in this venture obtained.

The large posters illustrating "Food Facts and Daily Diets" have been loaned to other towns for similar educational work on various occasions.

9.—OTHER ADDRESSES AND LECTURES

July 7.—University of Witwatersrand N.U.S.A.S. Conference.—"T.B. and V.D. in Urban Natives."

July 8.—Diocesan Native Conference, Springs.—"Training of non-European Health Assistants."

August 13.—Northern Districts' Parent-Teachers' Association, Johannesburg.—"Health of the Pre-School Child."

August 16.—University of Witwatersrand Biological Society.—"Death in the Afternoon."

August 24. — Housewives' League of South Africa—"Food Budgeting for Health."

September 3.—Red Cross Week, Nigel.—"Health and Happiness."

October 18.—Witwatersrand Church Council, Johannesburg.—"The Health of a City."

October 26.—Rotary Club, Johannesburg. — "Training and Use of non-European Health Assistants in Urban Areas."

November 10.—Alexandra Township. — "The Health Game" (children). "Happy Homes" (adults). —

November 19.—Race Welfare Society, Johannesburg.—"Race Welfare: the Medical Aspect."

November 22.—Junior Chamber of Commerce, Johannesburg.—"Health Round the World."

November 25. — Gamma Sigma Club, Johannesburg Bantu Social Centre.—"Health of the Urban Native."

January 25.—Library Group, Randfontein.—"Climate and Health."

February 4.—Goodwill Club, Brakpan.—"The Starvation Line." S.A. Health Congress, Johannesburg.—"What is a Health Department?"

March 15.—Rand Epileptic Employment Association, Johannesburg. — "Occupation: A Pleasant Diversion or a Social Necessity?"

March 18.—Dr. Gale (Asst. M.O.H.), Race Welfare Society, Benoni.—"The Uses and Abuses of Birth Control."

March 23.—League of Youth, Johannesburg.—“Malnutrition.”

April 12.—Transvaal Teachers' Association Congress, Krugersdorp.—“The Relationship of the Local Authority to School Medical Work.”

April 21.—Pharmaceutical Chemists (S.A.) Conference, Johannesburg.—“Public Health and the Chemist.”

April 26.—Society for Studying Bantu Conditions, Medical School, Johannesburg.—“Forty Square Feet.”

April 27.—Mental Hygiene Society, Johannesburg.—“Mental Hygiene and the Public Health.” —

May 10.—(Dr. Gale, Asst. M.O.H.) T.W.E.A., Benoni.—“Some Preventable Diseases.”

May 26.—Red Cross Society Jubilee Conference, Johannesburg.—“The Utility of Health Weeks and their Organisation.”

June 4.—Transvaal Onderwyservereniging, Boksburg.—“The Relationship of the Local Authority to School Medical Work.”

June 10. — Witwatersrand University Scientific Societies' Debate.—“Should Sterilisation be Legalised.”

June 21.—Public Meeting, Krugersdorp. — “Venereal Disease in School Children and Servants.”

June 23. — S.A. National Council for Child Welfare, Conference, Pretoria.—“The Cripple Child.”

10.—FILMS

Advantage of membership of the Union Film Library was taken during the course of nutrition lectures, when films on hygiene subjects were shewn. As a member of the film sub-committee of the S.A. Red Cross Society, the Medical Officer of Health took part in discussions and arrangements made regarding the purchase and the making of health films with a South African background. From July 24th to 26th the Medical Officer of Health attended a course of training at Pietermaritzburg, arranged by the Union Department of Education, on Motion Pictures in Education.

11.—CONFERENCES AND MEETINGS OF SOCIETIES

The Medical Officer of Health regularly attended, as the representative of Council, the meetings of the Witwatersrand and Pretoria Public Health Consultative Committee (and its Medical and Propaganda sub-committees), of the Social Hygiene Committee of the S.A. Red Cross Society (and its film and literature sub-committees), of the Witwatersrand Anti-Tuberculosis Council, and of the Reef Public Health By-laws Committee. Also at the only meeting held of the Witwatersrand Epidemic Committee.

The Department was fully represented at the S.A. Health Congress, held in Johannesburg from February 14th to 19th, and at the Red Cross Society's Jubilee Conference in Johannesburg from the 23rd to the 28th of May.

The Medical Officer of Health was Council's representative at the 31st Medical Congress held in Bloemfontein from the 20th to 25th of September, and together with the Health Visitor, at the Conference of the National Council for Child Welfare, held at Cape Town from 13th to 17th September.

IV.—PHYSICAL EDUCATION.

Coincident with the formation of a National Advisory Council for Physical Education and with the growing public interest in matters affecting the physical welfare of the people, a survey was made of the local facilities for exercise.

There exist within the Municipal area, for European use, 19 football grounds, 14 bowling greens, 107 tennis courts (apart from courts on private premises), five swimming baths, two golf courses, two hockey grounds, three croquet greens, five children's playgrounds, 12 open parks, and one aerodrome. Of these, a number are under Municipal control. For non-European use, outside the mine compounds, 10 football grounds, and eight tennis courts. These facilities are available for a population of 22,500 Europeans and about 22,000 non-Europeans. A sum of £9,050 is provided in the Municipal Estimates for expenditure on parks, sports grounds, and open spaces.

No gymnasium is provided but, apart from this requirement, it will be seen that the European residents are well equipped with lung and playing spaces. The Benoni Gymnasium and Health Club, a private organisation, very keenly meets the existing public demand for gymnastic facilities; their further development as a branch of Municipal activity is under consideration but awaits the arrival of a public demand.

V.—INFECTIOUS DISEASE

1.—GENERAL (Page 84)

The total number of accepted notifications increased from 373 last year to 675 in 1937-1938; an increase mainly due to the greater number of measles cases notified and to the fact that measles was "notifiable" only during the latter seven months of 1936-1937. The diseases most frequently notified were measles (383), enteric fever (67), lung tuberculosis (103), cerebro-spinal meningitis (32), whooping cough (25), and erysipelas (21).

With the exception of measles and whooping cough cases, almost all of which were nursed at home (except the mine Native cases which were all admitted to mine hospitals), 90% of the rest of the infectious disease patients were isolated in the various hospitals.

The necessary expenditure, and the preliminary plan, for the new Benoni-Boksburg Infectious Diseases Hospital was approved by Council during the year after full discussion with the Hospital Board and with the Municipality of Boksburg. The plans await final approval by the Union Health Department, but it is anticipated that building will start during the coming year.

Meanwhile the Benoni-Boksburg Hospital has generously assisted this Department, whenever possible, by admitting cases of infectious disease for which isolation facilities were necessary in order to protect the public health.

The infectious diseases inspector visited each of the cases notified, made full enquiries and reported in writing upon the source of the infection, the surroundings of the patient, etc., etc. Isolation of contacts and their immunisation were carried out when necessary, and full explanation given to the household, in each instance, about the infection.

2.—ANTHRAX

No human case was reported. Two separate deaths of cows within the Municipal area, from anthrax, were notified and were followed up in co-operation with the police and the Union Veterinary Department.

3.—SMALLPOX

Considerable anxiety was aroused as the result of the occurrence of a number of cases along the central and eastern Witwatersrand from November until May.

In November, as the result of cases reported from an area north of Germiston, emergency arrangements were made to vaccinate all persons in the Benoni Municipal area who presented themselves voluntarily for vaccination. A station was opened for Europeans at the Children's Aid Building and for non-Europeans at the Location Clinic. During the period November 10th to the 19th, inclusive, 1,612 Europeans and 10,765 non-Europeans were vaccinated at these Municipal stations, or at their places of employment. Lymph was supplied to private practitioners. During November it is estimated that a total of about 3,000 Europeans and 12,000 non-Europeans were successfully vaccinated.

Thereafter all public vaccinations were referred to the District Surgeon until April when the Medical Officer of Health and Assistant Medical Officer of Health were appointed by the Minister of Public Health as Public Vaccinators for Benoni in addition to the District Surgeon, in terms of Section 110 of Act No. 36 of 1919.

Council requested the Minister to make these appointments on the grounds that the public was looking to this Department to an increasing extent as the centre of all preventive work in Benoni; that such work must include vaccination services undertaken for the prevention of smallpox; and that, for the better protection of the public, the Department should provide such services daily at the Pass Office for non-Europeans, every Saturday morning for Europeans, and at regular intervals in the semi-rural areas for all races—not merely at times when cases occurred on the Witwatersrand.

Between December and March it is estimated that a further 4,000 Europeans and 5,000 non-Europeans had been vaccinated in Benoni, excluding Mine Natives who are all vaccinated on entering employment.

During April, May and June, after the Municipal Medical Officers had been appointed as Public Vaccinators, there were vaccinated by the Department 82 Europeans, 958 examined Natives at the Pass Office, 171 semi-rural Natives at the Pass Office, 45 non-Europeans at their homes, and 119 non-Europeans at the Location Clinic.

It may be said with some confidence that the population of Benoni is now well protected against smallpox. Sporadic cases in unvaccinated persons may possibly occur, but the risk of an extensive outbreak has disappeared. It is of interest, as proving the completeness with which the local Native population responded to the call for vaccination, that out of 500 Native Location school children inspected at the end of the year there was no child without the evidence of successful vaccination.

On the 18th of February a European resident of Benoni developed smallpox on a farm near Queenstown. He had left Benoni only four days previously. The source of infection was not established, but he had been in contact with many persons in the course of his business and had, two weeks before the onset of the symptoms, visited his farm to the north of Benoni. The vaccination stations were re-opened for two weeks. The house was placed in quarantine and all necessary steps taken to prevent the spread of infection.

On the 24th of March a Native female, living in the Location, was found to be ill with smallpox. All immediate contacts (12), together with the patient, were removed to the Rietfontein Isolation Hospital. All persons living in the Location within a quarter mile radius of the house were vaccinated or re-vaccinated. No further case was recorded.

On the 25th of May a European case was reported from Brentwood Park, to the north of and outside the Municipal area. The Department co-operated with the District Surgeon in vaccinating contacts and in carrying out disinfections.

4.—LEPROSY

Four cases were notified during the year and were removed to the Leper Institution. One was a Coloured male, aged 13, who had lived for nearly one year at the New Modder Coloured Location; he would appear to have been infected while living on a farm in the Free State. One was a Zulu male, aged 42, working on the Modder B Gold Mine for the previous four months, and recruited at Msinga. One was a Native female, aged 30, who had lived in the Location for the past three years. One was a Zulu male, aged 30, recently come to live in the Location from Natal.

In each case the contacts were examined by the District Surgeon and the necessary disinfection, etc., was done by this Department.

5.—TYPHUS FEVER

One case of flea-borne typhus occurred at Sunnyside Small Holdings; and one case of tick-borne typhus, in a European female, was imported into the town.

6.—ERYSIPELAS

Of the 21 cases notified, 11 occurred in Europeans, eight in mine Natives and two in non-mining Natives. The source of infection was but rarely discovered.

7.—PLAGUE

No case of plague, in rodents or human beings, was reported.

8.—MALARIA

No *A. costalis* (vel *gambiae*) nor *A. funestus* was found in the area. Two European and two mine Native deaths due to malaria were registered, but in each case the infection had been contracted outside Benoni.

9.—CEREBRO-SPINAL MENINGITIS (Page 82)

Eight deaths (one European, seven mine Natives) were registered. 32 cases, as compared with 20 in 1936-1937, were notified, including seven European, 21 mine Natives, three non-mining Natives, and one Coloured case. The infection, in all cases but two, occurred on the mines.

10.—DIPHTHERIA

Seven cases, of whom two died, were notified. Though this total is small it is higher than has been recorded in past years, and it was thought advisable to make Ramon anatoxin available to all practitioners in the area for active immunisation of children. The anatoxine, as well as anti-toxic serum for treatment of actual cases, was supplied free

of charge for use in indigent cases. Little use was made of the facilities for prophylactic immunisation, but as this disease is by no means prevalent the time was not considered opportune for any widespread publicity locally about diphtheria immunisation.

11.—SCARLET FEVER

14 cases, as compared with 17 in 1936-1937, all among European children, were notified. In each case the infection was a mild one.

12.—PUERPERAL FEVER

Four European, one Indian, and five Native cases were notified. Of the European cases, all were attended by a registered midwife and by a doctor. The Indian case had been attended by an unregistered midwife. Of the Native cases, all from the Location, two were attended by a doctor, one by a registered midwife, one was confined in hospital, and two had been attended by friends without knowledge of midwifery.

13.—OPHTHALMIA NEONATORUM

Four Native babies in the Location were found, during the year, to be suffering with this preventable infection of the eyes. In each case the infection was gonococcal in origin, and in no case had a registered midwife been in attendance. The mother of each, as well as the infected infant, was sent for treatment.

14.—ANTERIOR POLIOMYELITIS

One European child, infected outside Benoni, contracted this infection during the year.

15.—MEASLES (Page 81)

The notification of 202 European, 32 non-mining Natives, eight Coloured, one Indian, and 140 mine Native cases during the year indicates that measles was very prevalent. Even these totals do not shew the total of cases actually occurring, as only the first case occurring in each household or in a mine compound room during three weeks is accepted.

The table on page 81 shews that the incidence among Europeans is highest in the 5-9 age group, i.e., during the period of the first years at school. An epidemic started among these school children at the beginning of the September term, towards the end of the winter, and had not worked itself out until the arrival of the Christmas holidays. Mine cases occurred with a fairly even frequency right through the year. In a very few instances the infection of European cases could be traced to contact with infected cases on the mines, but the main outbreak was a school-borne infection due to the arrival at school of children who had become infected outside Benoni during the holidays.

No European case died, but two non-mining Native children in the Location died from lung disease superimposed on the measles infection.

Almost all the cases outside the mines were isolated in their homes, and the opportunity was taken in each instance to explain to the parents, verbally and through a printed leaflet, how the spread of infection should be controlled.

VI.—THE ACUTE BOWEL INFECTIONS.

(Pages 77—79).

Although the incidence of enteric fever is steadily falling, the number of deaths due to other acute bowel infections, such as enteritis, rose in 1937-1938. Two factors assisted in the production of this unhappy state of affairs—(1) the unusual rise of temperature, considerably above the normal, during the latter three weeks of November, with the result that fly-breeding, and other conditions favourable to the spread of these infections, occurred earlier in the summer than is usual; (2) the state of under-nourishment of a large section of the non-mining Native population, among whom enteritis infections produced a fatal result far more frequently than among the Europeans, owing to the lack of resistance to infection which occurs in those who are starved of the “health insurance” or “protective” foods.

Of all deaths during 1931-1936—25%, during 1936-37—16%, and during 1937-1938 — 19.5%, were due to acute infections of the intestines.

1.—ENTERIC FEVER (Page 78).

67 cases were notified during the year—the lowest return ever recorded for Benoni. Of these, 12 were proved to be “imported” cases, so the total of cases actually infected in Benoni during 1937-1938 was 55, as compared with 68 in 1936-1937.

For comparative purposes the totals of accepted cases (including “imported” cases) in previous years may be noted.

	European	Min. Nat.	Other Non-Eur.	Total
1931-32	25	92	43	160
1932-33	16	87	47	150
1933-34	29	182	103	314
1934-35	10	63	36	109
1935-36	51	119	54	224
1936-37	17	47	16	80
1937-38	14	30	23	67

The same procedure, as described last year, has been adopted in following up contacts, in immunisation with oral vaccine, and in isolating in hospital all cases and suspected cases.

Of the 67 cases, four were suffering with paratyphoid ("A") fever, including one European and three mining Natives. The most important feature of the 1937-1938 returns, apart from the continued fall in incidence, is that for the first time since 1931 the incidence was higher among the non-mining than among the mining non-Europeans. Of the 16 cases occurring in the Location, nine were resident in the Asiatic Bazaar where over-crowding and insanitation is still deplorably apparent. So long as insanitary conditions, of the type even to-day to be seen in the Native Location and the Asiatic Bazaar continue, so long will the danger of an extensive outbreak of enteric fever hang over our heads like the sword of Damocles—in spite of all the precautions which the Department takes to minimise that risk.

The enteric picture among the non-Europeans of Benoni is indicated by the following figures:—

	Non-European			Non-European		
	Enteric Death Rate			Enteric Incidence Rate		
	1931-36	1936-37	1937-38	1931-36	1936-37	1937-38
Mines	0.79	0.38	0.33	3.35	1.25	0.89
Outside Mines ...	1.38	0.41	0.37	3.20	0.93	1.05
All Non-Europeans	1.00	0.39	0.33	3.30	1.12	0.91

2.—ENTERITIS (Page 79)

The enquiries inaugurated into the causes of the high fatality in infants as the result of enteritis during the first two years of life have not been completed. Such information as we have elicited so far merely goes to prove what we know, in theory, already; that the risk of a fatal conclusion to an enteritis infection is much greater when the victim is suffering also from under-nourishment, and that the infection prospers wherever there is dirt, over-crowding, and ignorance.

To our shame it must be recorded that five European and 133 non-European deaths due to enteritis, among children under the age of two years, were listed in Benoni during 1937-1938.

3.—DYSENTERY

Only three deaths due to amoebic dysentery were recorded during the year; one mining Native and two non-mining Natives. The incidence of dysenteric infections is unknown, but, judged by the death returns, it would appear to be decreasing.

VII.—TUBERCULOSIS.

(Page 75)

The incidence rate for lung tuberculosis shows an increase for the total population, being 1.27 cases notified per 1,000 population as compared with 1.08 in 1936-1937. This increase was due to the greater number of cases notified among mining Natives, among whom the incidence rate was 1.54 as compared with 0.95 in 1936-1937. Among other groups there was a slight decrease in cases notified, but lung tuberculosis is still most frequent among the non-mining non-Europeans living in the Locations, i.e., among that section of the population which is under-nourished and is living in over-crowded and insanitary dwellings.

The death rate for lung tuberculosis shows a decrease; being 0.53 deaths among all races as compared with 0.76 deaths per 1,000 population in 1936-1937. This decrease may be ascribed, in part, to the increased action taken by the Department in isolating in hospital, under conditions where adequate treatment could be given, all cases as soon after notification as possible.

It was not found possible to make more than a tentative start with the Tuberculosis clinic during the year, but the plans have been laid for a service which will include:—

1. A weekly clinic for non-Europeans for diagnostic and observation purposes, with facilities for the X-Ray examination of all suspected cases at the Benoni-Boksburg Hospital. At this clinic all immediate contacts of positive cases will be seen.

2. Follow up of all cases and their contacts by the non-European health assistants.

3. Isolation of all open cases and their treatment by collapse therapy, wherever suitable, in hospital.

4. Provision at the clinic for pneumo-thorax refills.

5. Education of the public, especially the non-European public through the health assistants, regarding the significance of tuberculosis.

6. Provision of after-care facilities for, and observation of, cases returning from sanatoria and hospitals.

Much of this work was already in force at the end of the year, and the facilities for X-Ray examination at the Hospital were freely used. A pamphlet, in English and Afrikaans, was drawn up by the Department for the use of the newly-formed Witwatersrand Anti-Tuberculosis Council and distributed at the Tuberculosis stand erected by this Department for, and on behalf of the Anti-Tuberculosis Council at the Health Exhibition in Johannesburg during February. The same pamphlet has been reprinted for use by this Department in Benoni.

The Witwatersrand Anti-Tuberculosis Council was formed at the instigation of the Southern Transvaal branch of the Medical Association of South Africa. It is intended to collect information regarding the incidence of tuberculosis on the Witwatersrand and regarding the facilities available for the diagnosis and treatment of cases. It will make recommendations, where necessary, to Local Authorities, Government, etc., for the further control and prevention of the spread of tuberculosis. The Medical Officer of Health, Benoni, was elected Vice-Chairman of the Council.

The work of the Department during the year was, therefore, concerned with the further collection of information, the education of the public, and the provision of better facilities for the early discovery of cases and their isolation and treatment in hospital.

Certain findings regarding the cases notified during the year are of importance.

Of the 52 cases notified among mine Natives, seven died whilst still in mine hospitals; the other 45 were repatriated as follows:—13 back to Portuguese East Africa, six to Bechuanaland, six to Basutoland, three to Swaziland, 13 to various parts of the Cape Province, two to Natal, one to the Northern Transvaal, and one to the Eastern Transvaal. Before repatriation each case was adequately isolated in a mine hospital but, as far as is known to the Department, not a few of those repatriated to places all over the Union and on the East Coast under the existing Native labour arrangements were “open” cases.

The racial groups among the 52 mining Native cases were:—Xosa, 12; Msutu, 10; Shangaan, 9; Pondo, 4; Mchopi, 3; Baca, 3; Swazi, 3; Nyambaan, 3; Bechuana, 3; Tonga, 1; Fingo, 1.

Five of the 52 cases had worked on the surface only, 47 had worked underground. Among the surface cases, one had worked for 17 years and the other four an average of seven months each before showing the signs of clinical tuberculosis. Among the 47 underground workers the average length of service was just under six months.

As a single example of the potential danger to the community of these repatriated cases may be noted the history of a Basuto male, aged 30, named Mekane. He was repatriated from a local mine in 1936, suffering with tuberculosis. He was sent back to his home in Sekukuniland. In 1938 he returned to Benoni in search of work, and was found at the Pass Office in a moribund condition, coughing up sputum containing the tubercle bacilli among the other Natives. Mekane died at the Pass Office.

Among the 40 non-mining Native cases notified during the year were 21 males and 19 females—giving an incidence rate of 1.67 cases per 1,000 population for males and of 2.06 for females. The racial groupings of these cases were:—

Xosa, 12; Basuto 10, Msutu, 8; Zulu, 7; Fingo, 2; Swazi, 1. The occupations of the sufferers were:—

Females—Washgirls, 7; kitchen girls, 3; scholars, 2; housewives, 2; nil, 5.

Males—Labourers, 4; brickyard workers, 2; shop assistants, 1; tea-room waiter, 1; houseboy, 1; scholars and children, 3; abattoir worker, 1; lorry driver, 1; retired police boy, 1; ex-miners, 3; nil, 3.

The age-grouping of these Native cases is of some interest:—

	Non-Mining Natives Males	Natives Females	Min. Natives Males
0—9 	2	0	0
10—19 	1	4	5
20—29 	4	6	20
30—39 	3	5	16
40—49 	10	0	9
50 and over 	1	4	2
TOTAL 	21	19	52

Without age-group figures for the various sections of the Native population, this age-grouping of cases is not of great significance. But, pending the receipt of these population returns from the Department of Census and Statistics, it may be noted that among non-mining Natives 38% of the male and 79% of the female cases occurred in the 10—39 age-group.

Lung tuberculosis remains comparatively uncommon among the European population; it is far too common among the non-European population. There is no satisfaction in having to record that, out of the 40 non-mining Native cases 13 were notified only at the time of their death from tuberculosis, and that nine out of the remaining 27 cases died within two weeks of their arrival in hospital. The only satisfactory fact to be recorded in the story of tuberculosis in Benoni is that all but two of the cases alive at the time of notification were at once isolated in hospital. An important fact, in spite of the inadequacy of our present attack upon this disease, in view of the ample opportunities which ignorant Native sufferers have of spreading infection throughout the community.

Non-pulmonary tuberculosis, from the records available, is infrequent in this sunny town of Benoni. Only two cases, both Native, were notified during the year; but it was the cause of death of two mining Natives and three non-mining male Natives.

VIII.—MEDICAL EXAMINATIONS AT THE PASS OFFICE.

As an integral part of the full scheme for the control by this Department of infectious disease within the Municipal area, Council considered that the routine examination of Natives at the Pass Office should be done by the staff of this Department. This work had previously been done by the District Surgeon, but Council received support for its decision in a letter from the Secretary for Public Health definitely advising that these examinations be taken over by the Municipality.

While this work is the duty of the Government, Council wisely decided that an immediate and permanent advantage would accrue to the citizens of Benoni if the Pass Office medical examinations could be co-related as closely as possible with the work done at the Venereal Disease clinics and with other measures taken by the Municipality to control the importation of infection into the town and the spread of such infection within this area. This is the one outstanding instance in which Council has felt that Municipal action is essential even though the duty in question is a responsibility of Government. The question of payment by Government to Council for these services is receiving consideration.

The examinations are done under that Section of Regulations 19, Government Notice 1546/24, which reads:—

“Every male Native entering, employed, or residing in the proclaimed area shall present himself for medical examination and vaccination at such times and places as the registering officer may appoint.”

In terms of this notice the Medical Officer of Health and Assistant Medical Officer of Health have been appointed as medical officers for the examination and vaccination of Natives at the local pass office.

Compulsory medical examination of Native females is not favoured by the Native Affairs Department, but Council has desired to encourage female Native employees to present themselves for medical examination as freely as possible. Therefore a time has been set aside, at 2.30 p.m. every Wednesday, when the medical officer examines, in the presence of the Municipal Native nurse, all females who present themselves voluntarily for examination.

Every Native male who is found to be apparently free from infectious disease at the examination has his pass stamped with a statement that he is passed by the medical officer for employment. Similarly each female found to be apparently free from infection is given a similar note. It remains for the employers of Native Labour to satisfy

themselves before taking on new workers that recent official evidence of apparent freedom from infection is presented by the Native in each case.

Since the service started on the 1st April, 5,071 males and 69 females have been examined. Of these, 29 males (0.57%) and, four females (5.8%) were found to be suffering with venereal disease in a communicable form and were at once isolated in Rietfontein Hospital after the significance of the infection had been carefully explained to the individual. A further 547 males (10.7%) and 13 females (18.8%) were advised to attend at the Venereal Disease Clinic for further examination because they exhibited suspicious signs of old infection; of these, rather more than one-third, after detailed examination at the clinic, were found to be suffering with a venereal disease and were provided with the essential treatment.

What are the advantages of this routine inspection?

1. Infectious disease brought into the area by entering Native males can be controlled to an increased extent—at the Pass Office, the gateway to the town.
2. Employers of Native labour are provided with free facilities for the immediate examination, at 9 a.m. and 2 p.m. daily, of any employees whom they may suspect of suffering with an infectious disease.
3. Native sufferers are themselves given immediate and full advice on the availability and advisability of treatment.
4. A further centre has been created from which can be diffused knowledge of the significance of venereal and other infectious disease, of the dangers which may arise both to the individual and to the community from delay in receiving proper treatment, and of the facilities available for such treatment.

There are obvious objections to any such compulsory medical examination. But it is the considered opinion of this Department that an examination of this type is necessary so long as the Bantu population is so transitory and so ignorant of the full significance of infection. When health education has overcome the present superstitious ignorance of the great majority of the Bantu people, then the compulsory examination can disappear. Meanwhile the examination is of definite advantage to the Bantu themselves; again and again at the Pass Office it has been possible, by gentle and full explanation, to gain the willing co-operation and interest of sufferers in treatment and in preventive measures. Even further results have been apparent; not a few cases have arrived voluntarily at the clinics anxious for examination because sufferers seen at the Pass Office had passed on to them the new story of the dangers latent in old un-cured syphilitic infections.

Compulsion is avoided; an individual suspected at the Pass Office examination of an old infection has explained to him by the Native health assistant our reasons for the presumption and our reasons for advising him, in his own interest, to go to the clinic for a blood examination. His pass is stamped as fit for work—since he is not in an infectious state—and he takes back a note to his employer explaining that he can be employed with safety if he attends, when so required, at the clinic.

IX.—VENEREAL DISEASES.

(Page 87)

Since the appointment of a full-time Assistant Medical Officer of Health on April 1st, it has become possible after much delay to provide adequate services for the discovery and treatment of venereal disease in this area. These services now include:—

1. Clinics, at appropriate times, where free treatment is given. Separate clinics are held for Europeans, Natives, Coloureds and Indians, and for the different sexes of each racial group.
2. Isolation hospital facilities, free of charge, where necessary at Rietfontein Venereal Disease Hospital.
3. Home visiting to follow up and to gain the confidence of all out-patient cases, defaulters, and sources of infection.
4. Educational propaganda in the form of leaflets, addresses, etc.
5. Very close co-ordination of ante-natal and venereal disease clinics.
6. Routine examination of all Native males seeking employment and registering passes at the Pass Office, and voluntary examination of all Native females presenting themselves there for examination.

The Venereal Disease Clinics are open as follows:—

1. European—Children's Aid Building, Tuesdays. Females, 4-5 p.m.; Males 5-6 p.m.
2. Native—Location Clinic. Males, Wednesday and Thursdays, 4-6 p.m. Females, Thursdays, 10 a.m.—1 p.m.
3. Coloured and Indian.—Location Clinic. Males, Mondays, 5-6 p.m.; Females, Mondays, 4-5 p.m.

The chief value of the results achieved during the first three months of organised attack upon venereal diseases has been the indication which they afford of the need for such services. In three months it is not possible to come to any definite conclusions about the incidence of venereal disease, but attention may be drawn to several significant points.

Of the 146 cases beginning treatment at the clinics, April and June, only 19 were "early" acquired cases, 16 were congenital infections, and 111 (including one neurosyphilis) were "late" or "latent" cases. The discovery of so many latent cases offers a striking proof of the value of co-ordinated public health services under unified control. 49 of the 110 latent cases were discovered in consequence of the Pass Office examinations done by this Department; 12 were discovered at the ante-natal clinics; and most of the others through home visitation and propaganda carried out by the non-European Health Assistants and Native Nurse.

The lay public still thinks of Venereal diseases with a horror that is almost superstitious, and of all sufferers with these diseases as likely to spread infection on the slightest contact. Yet, in actual fact, transmission of venereal infections by other than venereal routes is really very uncommon, and the time when the sufferer is actively dangerous to others is during the first stage of syphilis when there is an open sore and in the later stages when rashes and sores develop on the skin. In gonorrhœa the discharge is always infectious.

The true problem, and all too often the tragedy, of venereal disease control, is that the early lesions of syphilis usually clear up — even with no treatment at all or with "quack" treatment—so that the sufferer thinks he is cured. This sense of security is utterly false, and may have serious consequences for himself and his family. Syphilis is a disease that spreads to all parts of the body; the untreated and the insufficiently treated case may go on for years harbouring the germ of syphilis. This has many consequences. It will diminish his mental and physical capacity. It will diminish his resistance to, and his rate of recovery from, other diseases and physical injuries such as fractures of bone. He may, without realising the significance of some late rash or sore, infect his wife or a woman may infect her husband. Disease of the heart and arteries may be a sequel to neglected syphilis, terminating fatally perhaps 20 years or more after the original infection. Neurosyphilis—paralysis and insanity—may await the victim. The sum total of physical incapacity and economic loss due to untreated syphilis cannot be easily exaggerated. It is sometimes said that "medical officers of health are poor financiers," but the ultimate saving to the community resulting from vigorous and adequate anti-venereal measures far exceeds their immediate cost. The effects of syphilis upon maternity and child life are more generally known; it is not

so well-known that, in addition to the obviously infected infants who generally die within their first year of life, a number of congenitally syphilitic children show none of the classical signs of the disease, but are stunted in growth (often mistaken for "malnutrition") and only develop obvious lesions when approaching the age of puberty.

The preliminary figures (page 87) show comparatively few cases among Europeans. Indeed we have reason to believe that venereal diseases are not common among the European population. But, even if we approach this question solely from the point of view of labour incapacitation, it is more than worth while to attack the venereal disease problem among the Native population.

Of the 111 old-standing cases of syphilis discovered among non-Europeans during these three months, only eight had ever received scientific treatment. Some of them gave a history going back for 10 or 12 years. The chances of complete and permanent cure of a case of syphilis decrease rapidly with the lengthening of the time interval between the primary infection and the institution of proper treatment. So the ratio of 111 "late" cases to only 19 "early" cases is of the greatest significance. It will be the aim of this Department to reverse that ratio within the next few years, i.e., to bring the majority of cases under treatment at the earliest possible stage. This figure of 111, like that of 16 congenital syphilitics discovered in the same period (and there will be many more during the coming year) is a measure of the inadequacy of our measures in the past.

At the same time, it must be remembered that a great many of these cases are "imported," did not originate in Benoni. It is therefore necessary, while there is a constant flow of Natives between town and country and between towns, that a simultaneous and co-ordinated campaign which will be nation-wide in its scope be undertaken if the venereal diseases are to be overcome. Benoni, in common with other towns which are spending much time and money on their local campaigns, has a right to demand that its efforts be not stultified through apathy and inefficiency elsewhere.

From the returns given, Native women attended the clinics better than the men. 92 female cases average 7.4 attendances each; 61 men only 3.8. This is, in part, due to the permanent residence in the Location of most of the women, while a number of the men are resident outside the Location and thus have further to come to the clinic, and men often move to another town in search of work and are lost to the clinics. Which serves to show that effective measures must be devised for the transfer of such cases to clinics in other towns.

On the whole, attendances have been regular and satisfactory. This is ascribed to the prompt follow-up of defaulters by personal visits—not by the Police, but by trained non-European Health Assistants who explain to the defaulters the potential consequences of neglect, and thus secure their co-operation not by coercion but by persuasion and conviction. The basis of the Department's attack upon the venereal disease problem is by education, not compulsion. Personal propaganda, including individual explanation to every person found with the external signs of old venereal disease, results in a general diffusion of knowledge. It is upon this method that the Department principally depends for success in securing the early attendance of those numerous primary cases which cannot be detected by routine examinations at the Pass Office and which, after all, occur only at haphazard intervals in the life of the individual.

Employers of Native labour have given willing assistance in allowing their employees to attend at the clinics. On occasions, employers express anxiety about retaining the services of workers who have to attend for out-patient treatment. But gradually it is appreciated that the best safeguard against spread of infection lies in weekly observation by a medical man whose duty it is promptly to isolate any case which becomes infectious. Every case that may spread infection is sent to the isolation hospital as soon as the sufferer is seen. Those who have to attend at the clinics week by week are not dangerous to others, nor will they be so long as they continue to attend.

No case of vulvo-vaginitis among school children was reported during the year. Gonorrhœa among non-Europeans was surprisingly infrequent—according to the returns. At the present stage no definite opinion can be given as to whether this infection is infrequent among Natives or whether it is still undiscovered; the latter explanation is the more probable.

With regard to the actual incidence of venereal disease among the Native population, our only checked figures show 24% of positive Wasserman reactions among all women attending the ante-natal clinics, and about 5% positive among those examined at the Pass Office who are sent to the Clinic as the result of suspicious evidence of old or recent infection observed at the examination. Dr. Gale, Assistant Medical Officer of Health, from his wide experience of Native health and disease, comments upon the figure of 5% as follows:—"The Pass Office population includes many Natives who are coming to town for the first time, and who have not had time to acquire infection from the Urban prostitutes. Dr. Cluver, examining Native recruits on the Witwatersrand Gold Mines, found Pondos and Xhosas to have a low incidence of syphilis as compared with Basutos and Bechuanas. It is true that Zulus, Pondos, and Fingoes prefer

town work to mine work, and these are the Natives we see at the Pass Office; the Natives among whom, in their home conditions, there is the least syphilis." It would seem therefore, that we cannot accept the figure of 5% as a fair index of the incidence of syphilis, latent or otherwise, among the male Native population. The figure is certainly higher than 5%.

But such a return provides no reason for an incontinent condemnation of the Native population as "riddled with syphilis." The urban Native venereal disease question is obviously serious, but it will respond to education; and the incidence of contagious disease among male Natives seeking work, and employed, in Benoni is less than one case in every 200. Under the existing procedure of examination at the Pass Office many of these infectious cases are discovered at an early date and are isolated until they are free from infection.

It is most important at the moment to realise that the sufferer with venereal disease is not a criminal, any more than is a sufferer with scarlet fever; and that syphilis and gonorrhœa are curable and controllable—if treatment is given in the early stages.

Such ultimate control of venereal disease will only be achieved through the widest personal education in the significance of these diseases. The "hush-hush" policy of the past must be broken down. Once again we are brought back to the rule of "Through Education to Health."

X.—VERMIN CONTROL.

1.—RODENTS (Page 95)

The main activities of the Department in rodent control during the year have been directed along three lines:—(1) the survey of properties within the Township area to discover rodent infestation, the destruction of rodents in such premises and the removal of rat-harbourages and rat-attractive foodstuffs; (2) the supervision of rat-proofing in new premises, and especially in new industrial premises; (3) the control of breeding of veld rodents in the semi-rural areas and in areas just outside the Municipal boundaries.

The only areas where the measures adopted were not entirely satisfactory were the Asiatic Bazaar and Native Location. There the general dilapidation and over-crowding of old wood and iron dwellings made the task of efficient rodent control impossible. Particular attention has also been paid to stables and to refuse tips.

Many complaints have been received about mole infestation and assistance has been given in exterminating these animals whenever possible.

2.—FLIES

Breeding of flies was unusually heavy during the unseasonable warmth experienced in November; as a result the inspector in charge of fly-control work had a heavy time during the summer. Stables—for horses, cows, and mules—gave him most anxiety and needed continual attention to ensure that manure was moved before fly-breeding could occur. Premises on which horns, and other products removed from the abattoir, were kept, also required constant visits and advice.

Though there still remain a number of stables within the built-up areas of the Township and its suburbs, the town was freer than ever before of flies during the year just ended. The same cannot be said of areas outside the township proper, but gradually the Department is gaining its end—that of creating among householders an active dislike of flies, and a realisation of the life-history of the fly among those who keep animals or use manure.

3.—MOSQUITOES

Only culicine and non-malarial anopheline mosquitoes were found. Control measures, including anti-larval oil spraying of all potential breeding places on public property, were continued. The most frequent breeding continued to occur on private premises in old tins, tyre covers, broken bottles, and uncovered water tanks. Constant attention was drawn to these breeding places. As a result, in the Township, mosquitoes were less frequent. This was not true in the semi-rural areas.

4.—BUGS AND OTHER VERMIN

During 1937-1938 there were eight private fumigators working in the area under licence from the Municipality. 783 dwellings were fumigated by them during the year to kill bugs.

Destruction of dwellings by ants formed the reason for many complaints to the Department. As far as possible, assistance was given by removing the queen ant, gassing, etc. A disturbing feature of the year's work was the frequency with which householders reported destruction by ants in houses in Northmead and the Western Extension—houses which had been erected only during the past two or three years. Ant guards are an expensive item to include when building a new house, and they do not prevent the ants from building up beneath the centre of the flooring. The Department has recommended the laying of a 6-inch layer of cyanide sand under all wood floors and the proper painting of all joists and bearers with carbolinium. It may be necessary to advise that a concrete foundation be laid in those areas where ants are prevalent.

Owing to the occurrence of bugs in several houses and flats before the building had been completed and occupation entered upon, it became necessary to circularise all builders calling upon them to stop the practice of allowing Natives to sleep in the rooms of premises under construction. The Union Health Department was asked to consider the possibility that bugs and their eggs were arriving in the wood delivered in Benoni. An exhaustive enquiry at the ports and timber-yards was held and the Union Health Department advised that there was no evidence of bug infestation of timber in these places.

XI.—FOODSTUFFS.

Continued attention was paid to the control of food-handling in shops, market gardens, markets, restaurants and hotels.

In all shops where foodstuffs are sold the installation of a wash-hand basin, with running water, soap, towels, and nail brush has been called for. In some instances these aids to cleanliness, when provided, may not be used as freely as desired, but their presence in every instance has served to give food-handlers a valuable reminder of the importance of personal cleanliness in dealing with the public food supply.

Tea-rooms and restaurants have been required to coat all internal walls of kitchens and pantries with a light-coloured hard enamel paint; a procedure which has encouraged greater obvious cleanliness. Other requirements, duly provided, have been suitable vegetable store-rooms, and properly enclosed cupboards for the storage of cups, plates and other utensils. Grocers' shops, in particular, have shewn a great improvement as the result of keeping all foodstuffs under cover.

Bakeries improved generally, but the methods of handling bread during delivery are not, as yet, all that is desired. In this, as in other defects in food-handling, an improvement is anticipated as soon as full and regular personal instruction in the practice and reasons for hygienic food-handling can be given in the demonstration room, planned in the Department's new premises.

KAFFIR EATING-HOUSES are becoming much cleaner, and a real advance has been made by the removal of butcheries which in the past were placed in the interior, or formed an actual part, of the eating-houses. The butcher shops are now required also to erect separate offal rooms—a procedure which reduces the amount of fly infestation considerably. Opening roof lights, louvred ventilators over the kitchen stove hoods, and a lighter and brighter internal appearance to the premises are still needed in some of the eating-houses. But the stage has now been reached when the

major work of the Department in these places, which serve as the restaurants of the itinerant Native, is to educate the customers themselves to be cleanly in their use of the premises.

The **ABATTOIR** (page 90) has continued to function well. The steady increase in the amount of slaughtering, experienced during the past few years, received a temporary check owing to the withdrawal by some of the butchers of a certain amount of slaughtering for other towns. It is pleasant to be able to report that, by the end of the year, the differences of opinion had been overcome and all the lost trade returned to Benoni.

With a steady market obtained for all by-products, this plant continued to increase in value as a useful side-line of the abattoir. The cold storage plant was increased by the addition of one chilling room and one offal room; while improvements to machinery included the addition of a new spray tower.

The vexed question of the best methods of handling and delivery of meats received the very careful consideration of the Department during the year, in co-operation with other Municipalities.

THE MILK SUPPLY of the town increases and many of the dairymen are willingly meeting the wishes of the Department in respect of alterations and improvements to cow-sheds and milk-rooms, the provision of sterilizing plants for utensils, cooling plants, and bottling machines.

On the 30th of June there were licensed 28 Producers, 15 Producer-Distributors, and 15 Distributors. Of the 43 producers and producer-distributors, 26 have water laid on to taps within the cow stables, six have adequate sterilizers for their utensils, and 40 have milk coolers. Of the 15 distributors, none has a sterilizer, and only six have coolers.

It is clear that much has to be done before the equipment of the 58 dairymen is brought up to a minimum standard of suitability, quite apart from the further necessity for educating many of them in the correct methods to be used in the production and distribution of a safe and clean milk. The Dairy Inspector has gradually been inculcating these ideas into the minds of the dairy workers, but it is intended further to give a series of lecture-demonstrations on dairy methods in relation to the public health during the coming year.

Meanwhile the number of producer-distributors decreases, and slowly the local trade begins to fall into the two separate groups of producers and of distributors. With this increasing centralization of the milk supply the time draws nearer when consideration can be given to the proposals discussed by the Public Health Committee during the year for a central Municipal milk pool. Under the scheme discussed by Committee, all milk for sale in Benoni would pass through a central building; two grades of milk would

be recognised—fresh milk, from producers who could guarantee an adequate and regular low bacterial count for their milk; and pasteurized milk, for all other supplies. The grades would be examined on entry, unsatisfactory milks refused and condemned, all milk would then be cooled, the fresh milk bottled, the rest pasteurized, cooled and bottled, and the distributors would then be able to remove the milk for despatch to the public. The Municipality would do no distribution under such a scheme, only the testing, receipt, pasteurization, and bottling of the milk in bottles or other containers supplied by the distributors but sterilized at the Municipal pool.

The scheme is to be placed before the dairymen for their full consideration and discussion.

FOODSTUFFS CONDEMNED AND SAMPLES OF FOODS ANALYSED are detailed on pages 91 and 92.

XII.—MATERNAL AND CHILD WELFARE.

(Pages 86 and 88)

As from the 1st of April, with the arrival of a full-time Assistant Medical Officer of Health to attend at the various clinics, the plans drafted last year were put into action. In the place of one European infant clinic existing in past years, unattended by a Medical Officer, the Department now provides ante-natal and infant clinic services for Europeans, Natives, Coloureds, and Indians. A branch European clinic has been opened in the pavilion at the residential suburb of Northmead. An additional European health visitor has been appointed, and the Native nurse has been relieved of her maternity duties to enable her to undertake the preventive work which is the task of this Department.

The clinic services now provided are:—

INFANT CLINICS: European — Wednesdays and Thursdays, 2-4 p.m. in Town; Tuesdays, 11-1 p.m. at Northmead. Natives—Fridays, 10-1 p.m. and 2-4 p.m. at the Location Clinic. Coloureds and Indians — Mondays, 10-1 p.m., Location clinic.

ANTE-NATAL CLINICS: Europeans — Tuesdays, 2-4 p.m., in the Town; 10-11 a.m., Northmead. Natives — 10-1 p.m., Wednesdays. Coloureds and Indians—Mondays, 2-4 p.m.

The record of attendances at these new clinics during the three months since their inception shows that the public appreciates the facilities now offered. A real advance has been made toward the ultimate safe-guarding of the health of young Benoni, but this will not be consolidated among the European population until adequate clinic accommodation is

provided. The rooms at present available in the Children's Aid Building are inadequate and unsatisfactory. Sufficient and suitable accommodation will be provided in the new Health Department building which Council has under urgent consideration.

With the opening of ante-natal clinics for all races was linked the provision by the Benoni-Boksburg Hospital Board of a District Midwifery Service. The Municipalities of Boksburg and of Benoni together pay one-third of the cost of this service, the remaining two-thirds being paid by the Provincial Administration and by Government. For Benoni the full-time services of two European midwives have consequently become available, free of charge, to women of all races. These midwives attend at the Municipal ante-natal clinics and there make contact with expectant mothers whom, later, they may assist at the time of confinement. The ante-natal clinics are also linked with the venereal disease clinics; already a number of the non-European cases are under-going anti-syphilitic treatment, and it is anticipated that the number of congenital syphilitics born in Benoni will, in time, be reduced to a minimum. The Wassermann test is done as a routine at the ante-natal clinics.

Infant Welfare clinics for Europeans at the Children's Aid Building have long been established; but on April 1st an additional European clinic was opened at Northmead and for the first time a Medical Officer is in attendance at all Infant Clinics.

It is reported with regret that the European infantile mortality rate rose slightly during 1937-1938. The chief enemies of child-life are poverty and ignorance. In many homes in Benoni, especially among the non-European population, there is insufficient money to purchase the foods required for health by nursing mothers and by very young children. There is also much ignorance regarding the constituents of the basal diet essential for health.

In co-operation with the Children's Aid Society, free milk and vegetables are supplied to the most necessitous cases among Europeans; in the Location dried milk is supplied; technical advice is given regarding the soup kitchen maintained in the winter months by the Joint European-Native Council with Municipal assistance; and an effort, referred to elsewhere, is being made to stimulate the home-growing of vegetables.

Constant efforts are being made to overcome ignorance, to impart to the mothers knowledge of infant rearing and management, and to show how scanty incomes can be expended to the best dietetic advantage. In this connection, the home visits paid by the health visitors are more important than attendances at the clinics. The value of these home visits is not to be assessed simply in terms of the number of such visits paid; health education in the homes is a slow process, often necessitating time-consuming practical

demonstrations. This work is needed most in the Location where one Native nurse cannot cope adequately with the rising Native demand for the new knowledge which the Department is bringing to the people about infant welfare. Several such nurses could, with great advantage, be employed for work among the non-European population.

The total number of midwives registered for practice in Benoni on the 30th of June was 36; of those 26 are certificated (including three Natives), and seven not certificated. It has been the regular duty of the health visitors to inspect the bags of these midwives and to keep in constant touch with them.

XIII.—NUTRITION AND POVERTY.

The existence of a considerable amount of ill-health and of fatal sickness, which can be traced to origins among which under-nourishment is a most important factor, has stimulated the Department to start a careful analysis of the existing nutritional condition of the people, of the foodstuffs consumed, of the costs of such foodstuffs, and of the incomes of the local population.

The plan of campaign now set on foot is to include:—

1. The collection of information.

- (a) By surveys of budgets of separate families.
- (b) By censuses of foodstuffs sold in the area.
- (c) By surveys of current prices and of availability of various foodstuffs.
- (d) By the assessment of the nutritional and health condition of the people and especially of children, through detailed individual physical examinations.

2. The arousal of interest in the factors leading to optimum nutrition of the body.

3. The provision of education to overcome individual and communal ignorance of facts relating to nutrition and health.

The steps already taken under (2) and (3) have been recorded on page 25. Having obtained the information required in (1) within the next 12 months, and having correlated this with the findings of the surveys which Government is concurrently carrying out elsewhere, it should be possible to make definite proposals regarding the removal of under-nourishment in this area.

As a preliminary measure, to obtain information under (1) (a), family surveys were done during the four winter months. 22 Native families in the location and 10 European families of the poorer class in the town were surveyed. Having gained the co-operation of the heads of the families, the

returns were checked by weekly visits, and by daily visits wherever necessary. All records of expenditure were kept on forms prepared specially for the purpose. The average size of the European families was 3.5, and of the Native families 4.75—counting each child under the age of 12 as half an adult. The salient findings are as follows:—

PER WEEK.	EUROPEAN.		NATIVE.	
	Per Family.	Per Individual.	Per Family.	Per Individual.
TOTAL INCOME.	£2 18 0	£0 19 9	£1 14 6	£0 7 3
Expend. on Food	1 2 9 (40%)	0 6 6	0 14 0 (43%)	0 2 11¼
„ „ Rent	0 14 6 (25%)	} 0 13 1	0 5 4 (17%)	} 0 3 9¾
„ „ Fuel	0 6 10 (12%)		0 2 6 (8%)	
„ Transport	0 0 7 (1%)		0 0 9 (2%)	
Other Expend. ...	0 12 7 (22%)		0 9 5 (30%)	
Total Expenditure	£2 17 3	£0 19 7	£1 12 0	£0 6 9

The more detailed return of the food expenditure item is:—

PER WEEK.	EUROPEAN.		NATIVE.	
	Per Family.	Per Individual.	Per Family.	Per Individual.
I Vegetables and Fruits	£0 1 10 (8%)	£0 0 6¼	£0 1 0 (7%)	£0 0 2½
II Milk & Cheese	0 1 3 (6%)	0 0 4¾	0 1 3 (9%)	0 0 3
III Meat, Fish and Eggs	0 6 5 (28%)	0 1 9¾	0 4 6 (32%)	0 0 11½
IV Mealie Meal, Bread, Fats, Sugar and Other Groceries	0 13 3 (58%)	0 3 9¼	0 7 3 (52%)	0 1 6¼
TOTAL ...	£1 2 9	£0 6 6	£0 14 0	£0 2 11¼

These findings will be analysed in a later report upon the nutrition of the people of Benoni, to be presented when the other enquiries have been completed.

But it is of immediate interest to note that, as shewn in the Department’s booklet, “Food Facts and Daily Diets” (published during the year), the cheapest price at which the minimum essential food requirements, a diet balanced for health, for one adult can be purchased in Benoni shops is 10/6 a week. To achieve this minimum figure which will bring the weekly food supply above the starvation line, all food must be bought for cash, be carefully chosen and carried away in person. The figure of 10/6 includes nothing for the cost of fuel for cooking or of ice for preservation. The balanced diet purchaseable at this figure contains food-stuffs for which the cost works out roughly equally for each

of four food groups, and allows the housewife to do her weekly food budgeting roughly according to the following plan: "Of the weekly food money, spend—

- $\frac{1}{4}$ (25%) or more on vegetable and fruits;
- $\frac{1}{4}$ (25%) or more on milk and cheese;
- $\frac{1}{4}$ (25%) or less on meat, fish and eggs;
- $\frac{1}{4}$ (25%) or less on bread, mealie meal, sugar, fats and other groceries."

The food budgets, given above, both for the poor European families with an annual income of about £150, and for the Natives with a family income of about £90, disclose that according to this rough plan they are expending a markedly excessive proportion of the food money on the starchy foods, sugar and other groceries, and a high proportion on meat. These people are merely following the natural law of the poor—buying first the foods which fill the belly, provide energy and bodily heat, and are at the same time the cheapest, bulk for price; buying meat next because it adds taste to an otherwise dull diet; and hardly buying at all the "health insurance" or "protective" foods which are expensive and difficult to obtain.

The European families investigated in these surveys include, on the average, one bread-winner in each family and are among the poorest Europeans in the area. The Native families, on the other hand, with an average of £90 p.a. income include those above the usual financial position of location families; in all cases the surveyed families included at least two bread-winners, for Native wages rarely exceed £4 a month.

The preliminary findings at least suggest that, pending the completion of the extended enquiries (which will include persons in the higher income groups) much can be done along the following lines:—

1. By an attempt to make available the "health insurance" foods—milk, milk products, vegetables and fruits at a price within the pockets of the poorer residents, and especially of the whole Native population.
2. To encourage the consumption of such foodstuffs when it becomes possible for these individuals to get them without being starved of the energy-producing foods.

XIV.—HOTELS AND BOARDING HOUSES.

In December the Department was enabled, by the courtesy of the Chief Magistrate, as Chairman of the Benoni Liquor Licensing Board, to co-operate once again with that Board in connection with the hygiene and sanitation of hotels. A long report, containing full details about defects found and improvements desired, was presented to the

Board. The results are to be seen in the very marked improvement in the cleanliness of hotels and their kitchens, in the better Native quarters provided, in the more adequate disposal of refuse, the storage of food, and the provision of ablution and latrine facilities.

One hotel was demolished and modern structure erected in its place. At the end of the year there were eight hotels within the Municipal area, containing a total of 120 bedrooms.

There are 15 licensed boarding houses, containing a total of 215 bedrooms. In addition to these there are three boarding houses on mine properties catering for table boarders only.

Some of the boarding houses remain below the standards which the Department has set for their guidance, but constant supervision and pressure is being brought to bear upon them to set these houses finally in order.

XV.—WATER SUPPLY.

The supply for all premises except certain mines and most houses in the semi-rural areas comes from the water-works of the Rand Water Board. The supply is most satisfactory.

A survey of the properties in the semi-rural areas on which the water supply is obtained from wells reveals that there are 252 plots each with one well.

Of these, 154 are boreholes, 37 are lined wells, 23 are unlined wells, and 38 are classified merely as wells. As regards covering, this is satisfactory in 173 instances, unsatisfactory in 52, and no cover at all is provided for 27 wells. As regards the collection of the water, in 131 instances a windmill or electric pump is used, in 26 a windlass, and in 95 a handpump.

No clear evidence has been obtained of contamination of any of these wells, but in 10 cases the well is within 50 feet of a pit closet.

The question of the water supply in the semi-rural areas is receiving attention.

XVI.—NIGHT SOIL AND REFUSE REMOVAL AND DISPOSAL.

The services provided under this heading come under the direct control of the Sanitary Manager's Department, as also all street cleansing services, the public conveniences, and the Municipal Compound.

On the 30th of June, 1938, 1,721 stands within the Township had been connected to the main sewer, leaving 284 stands still to be connected in this area.

Refuse is tipped on controlled sites at 11 points within the Municipal area, of which three are mine, and eight

Municipal tips. Constant inspection was maintained over these tips and no nuisance arose from them after certain improvements in control had been put into action.

XVII.—ROUTINE SANITARY WORK.

on Page 88 is given the total of inspections carried out by the Inspectors. The value of this work, which forms the backbone of the routine duties of the Department, cannot easily be appreciated from a mere record of work done. The proof of the success of the work of the individual inspectors is to be seen in the increasing number of requests received by the Department from householders for assistance, in the large number of nuisances and other difficulties dealt with by the inspectors without even the serving of a notice, in the evident co-operation existing between the inspectors, the house agents, owners and occupiers, and in the small number of cases which have to be brought before the Magistrate's court.

Much time has been taken up during the year with the various housing surveys, inspections of wells, etc., in semi-rural areas, and so on.

Increased attention has been paid to the sanitary condition of premises in the semi-rural areas; some of this work is reported upon in Report "B" (Housing) on page 58.

XVIII.—HOSPITAL AND OUT-PATIENT SERVICES.

The free out-patient services provided daily in Benoni by the Benoni-Boksburg Hospital Board continued to supply valuable medical attention to the indigent residents. An average of 143 European and 1,129 non-European attendances each month was recorded (see page 88).

The district maternity service provided by the Hospital Board during the year is referred to on page .

An additional private nursing home, with 18 beds, was completed and opened. Apart from cases treated in the three local nursing homes and in the Kleinfontein Hospital, the Benoni-Boksburg Hospital admitted 1,740 Benoni residents during the year; these included 481 Europeans and 927 non-European free patients, and 148 European and 184 non-European paying patients.

XIX.—OTHER SERVICES.

1. EXAMINATION OF TEMPORARY EUROPEAN EMPLOYEES. — During the year 90 employees were examined before starting work in a temporary capacity with the Municipality.

2. EXAMINATION OF NATIVE EMPLOYEES. —

From July 1st to March 31st, all Natives entering the service of the Municipality were medically examined prior to engagement at the Compound. 738 Natives were examined during this period, 29 were refused, 10 were referred for further examination or for treatment. From April 1st onwards, all Municipal Native employees were sent to the Pass Office for medical examination. During April, May and June, 114 Natives were examined and only one was referred for further examination at the clinics.

3. TREATMENT OF SICK MUNICIPAL NATIVE EMPLOYEES.—

During December the old sick room at the Compound was once again put into order and equipped as a clearing hospital, containing six beds, for the treatment of Natives in the Compound who did not require General Hospital treatment. The provision of these facilities has greatly assisted the work of treating sickness among the 800 or so Natives in the Compound. Every case requiring in-patient treatment had previously to be sent to the Benoni-Boksburg Hospital. Up to the 30th June, 33 Natives had been admitted to the sick room. In addition 13 Native cases of venereal disease were admitted for one or two nights pending transfer to Rietfontein Hospital.

4. TREATMENT OF MEMBERS OF THE MUNICIPAL FIRE BRIGADE. —

From the 1st of April, the Assistant Medical Officer of Health was available to provide medical attention for firemen who might be sick while on duty.

XX.—STAFF.

Additions to the staff during the year included Miss Fitschen, as additional health visitor, on the 1st of October. Dr. G. W. Gale, as Assistant Medical Officer of Health on the 1st of March. Mr. E. R. Lupton, as meat inspector at the Abattoir on the 2nd of December, but later transferred to fill a vacancy as health inspector as from the 19th of April. Miss Krog, as typiste, on the 1st of January, replaced on her transfer on the 28th of April by Miss Hansen. During October and November the three non-Europeans, who had been at the head of the successful candidates at the examination held in September, were appointed as non-European Health Assistants.

On the 28th of February, Dr. E. M. Higgs retired from her part-time employment as Medical Officer of the Location V.D. clinic. Dr. Higgs had, for seven years, rendered the keenest service to Council and to the community in connection with the treatment of non-Europeans suffering with venereal disease. She achieved one most important result—that of gaining the confidence of ignorant and shy Native women in the efficacy of this white man's medicine. To her fell the task of preparing the soil and of sowing the seed of

venereal disease control among the non-European peoples of Benoni. She did this work with an eagerness and an efficiency that has ensured, as far as she could manage, the fullest harvest in years to come. It will fall to others to reap that harvest and to keep the soil rich in those ideas of prevention and control which she instilled into the people of the Location. But the ground work laid by her during the past seven years will remain as a lasting memorial to her work.

On the 31st of January the Department said farewell to Mr. T. R. Alison when he retired on pension from the post of health inspector after 23 years services with this Municipality. His quiet and unassuming efficiency and his tactfulness in dealing with members of the public will be greatly missed.

On the 31st of December, Miss D. F. Ferguson left the Department prior to her marriage, and carried with her the sincere wishes of her fellow-workers.

STAFF

Medical Officer of Health.—Dr. C. C. P. Anning, M.A., M.R.C.S., D.P.H.

Assistant Medical Officer of Health.—Dr. G. W. Gale, MSc, M.B., Ch.B., D.P.H., D.T.M. & H. (from 1st March, 1938).

V.D. Clinic Medical Officer (part-time). — Dr. E. M. Higgs, M.D., D.P.H. (up to 28th February, 1938).

Health Inspectors. — Outside Areas, Mr. S. L. Chapman; Foods and Dairies, Mr. B. N. Booysen; District (west).—Mr. T. R. Alison (up to 31st January, 1938), Mr. E. R. Lupton (from 19th April, 1938); District (east), Mr. H. E. Linton; District (Locations), Mr. P. J. Howett; Infectious Disease and Vermin, Mr. N. Youens.

Learner Health Inspectors.—Mr. W. B. Tite, Mr. C. S. Pittendrigh, Mr. N. B. H. Veldsman.

Rat Catcher.—Mr. P. T. Engelbrecht.

Health Visitors.—Miss K. A. Forsyth, Miss F. Fitschen (from 1st October, 1937).

Clerical Staff.— Clerk, Miss K. N. Maddock; Typiste, Miss D. F. Ferguson (up to 31st December, 1937); Miss H. Krog (from 1st January, to 28th April, 1938); Miss W. W. Hansen (from 28th April, 1938).

Location Native Nurse.—Miss W. E. Majola.

Non-European Health Assistant.—Mr. P. B. Mtimkulu (from 20th October, 1938); Mr. A. S. Vil-Nkomo (from 1st November, 1938); Mr. J. Louw (from 20th October, 1938).

Abattoir Superintendent.—Mr. H. J. Davey.

Meat Inspector.—Mr. E. R. Lupton (from 2nd December to 18th April, 1938).

Assistant Meat Inspector.—Mr. J. Selby.

Abattoir Mechanic.—Mr. S. Mann.

Abattoir Clerk.—Mr. J. H. Dawkins.

Abattoir Cleaners.—Mr. J. A. Fourie, Mr. J. J. Swane-poel, Mr. F. Brandt.

Also.—One Coloured Assistant (Rodent Control), Temporary; two Native Messengers (Office); seven Native Cleaners (Abattoir); six Native (Rodent Control); one Native Sprayer (Mosquito Control).

XXI.—GENERAL.

1.—OFFICE ACCOMMODATION

The Public Health Committee agreed during the year to the provision of new quarters for the Department, including the necessary offices, a small laboratory, rooms for the European clinics and out-patients department of the Benoni-Boksburg Hospital, lecture and demonstration room for health educational activities, etc. Plans are in process of preparation, the necessary funds have been allotted, and a site is under consideration.

2.—SCHOOL MEDICAL INSPECTION

On the 7th of September the Medical Officer of Health gave evidence on behalf of Council before the Transvaal Education Commission along the lines detailed on page 50 of the last Annual Report. Representations were also made to the Provincial Education Department to the effect that, unless that Department could provide medical inspection services which would allow, as a minimum, three routine examinations of every child during its school career—at admission, as an intermediate, and on leaving — together with annual re-inspections of those children found to be suffering with defects requiring treatment, the Education Department should delegate these duties of school medical inspection to the Benoni Town Council. The Education Department has not, during the year, seen its way clear to meet this request. Meanwhile each Benoni school child is medically examined not more than once in its school career, and the school nursing services remain inadequate.

3.—DENTAL CLINIC

During the year Committee considered a proposal from the Springs Dental Clinic Board that Benoni, and possibly other East Rand towns, might join with the existing Board so that a full-time Dental Officer might be appointed to serve the children in these areas. It was proposed that Council might provide clinic facilities and make a grant

towards the cost of the scheme, the Provincial Education Authority making an equivalent grant. Pending further discussion of the responsibility of the Municipality to undertake what is considered to be, under the existing and curious allocation of duties, a Provincial Education Department responsibility, no decision was reached.

4.—LABORATORY

The S.A. Institute for Medical Research was approached during the year with a request that it might establish a branch bacteriological laboratory in Benoni, in quarters to be provided by the Municipality in the new Health Department premises. Delays in obtaining bacteriological diagnostic evidence in diphtheria, enteric fever, etc., were quoted in support of this proposition. The Institute was unable to accede to the request. This Department, therefore, is arranging to undertake urgent bacteriological examinations in the small laboratory to be provided in the new building.

5.—PUBLIC HEALTH BY-LAWS

The Department continued to be represented at the meetings of the Reef Uniform Public Health By-laws Committee. The Committee concluded its duties and a complete set of uniform by-laws has now been prepared for the consideration and approval of the Local Authorities concerned.

6.—CRIPPLED CHILDREN

A preliminary survey to discover the number of crippled European children in Benoni was undertaken at the request of the Committee collecting information for the use of Professor Girdlestone, when he visited South Africa in connection with the Nuffield Orthopædic Fund.

There were found to be 13 European Children with some degree of crippling, ranging from disease of the hip to talipes, attending schools in the town. Their ages ranged from 5 to 14.

REPORT "B"

UPON THE HOUSING OF THE PEOPLE

A preliminary statement was included in the Annual Report for 1936-1937. Progress has been made during 1937-1938 along the lines then laid down.

1.—HOUSING SURVEYS

(a) EUROPEAN DWELLINGS IN TOWNSHIP AREA

This survey started in April, and by the end of June, 75 stands containing 948 rooms had been completed. Of these rooms, 116 were living rooms, 380 bedrooms, 145 kitchens, 56 pantries, 66 bathrooms, and 68 were Native quarters. The remainder included miscellaneous rooms. It

was found that 138 rooms were satisfactory, 560 required improvement, 50 were unfit for human habitation, and 200 (mostly miscellaneous store-rooms, etc.), were listed for demolition. Only 12 rooms were found to be over-crowded.

On these 75 stands were resident:—

Europeans:	483	adults,	246	children—Total	....	....	....	729
Natives	:	80	„	8	„	—Total	....	88
Coloureds	:	24	„	7	„	—Total	....	31
Indians	:	14	„	10	„	—Total	....	24

Sanitary accommodation on these stands included 16 earth closets, 128 water closets for Europeans, and 31 water closets for Natives.

It is hoped to complete the survey of the Eastern half of the Township within the next six months; but outstandingly bad features are receiving attention at once, and rooms listed for demolition are gradually being removed. The first findings of the survey suggest that there are not many properties in the Township to which the term “slum” can be applied. But there are not a few which, because of the carelessness and ignorance of the tenants, are kept in a dirty and insanitary state.

(b) NATIVE DWELLINGS IN THE SEMI-RURAL AREAS

A survey was completed of Native dwellings in the following areas which lie within the Municipal boundary but outside the built-up Township and Suburban areas:—

1. Sunnyside Small Holdings; 2, Kleinfontein Small Holdings; 3, Van Ryn Small Holdings; 4, Fairleads Agricultural Holdings; 5, Erffontein Farm; 6, Rynfield Agricultural Holdings; 7, Benoni East Agricultural Holdings.

Within these districts were found 419 male and 268 female adult Natives, and 347 Native children. Of the 787 adults, 338 were classified as squatters and others, 225 were classified as bona-fide domestic servants, 33 were wash-girls, and rest were employed as dairy workers, garden and land workers, kraal boys, etc., etc.

These 1,034 Natives were resident in dwellings containing a total of 466 rooms, and their condition is summarised in the following table:—

	Brick	Stone	Mud brick	Wood and Iron	Total
Satisfactory	29	0	1	6	36
Require Improvements	66	0	29	65	160
To be demolished	30	5	75	160	270
TOTAL	125	5	105	231	466

It is apparent that a considerable proportion of these dwellings are unfit for human habitation, an opinion which is supported when the general lack of suitable latrine accom-

modation and of a pure water supply is also taken into account. The question of the action to be taken to improve conditions in these areas is receiving consideration; the matter is complicated by the presence of many "squatters" who, not being bona-fide domestic servants, are not legally entitled to reside there.

(c) SOUTH AFRICAN RAILWAYS AND HARBOURS PROPERTIES

A full survey of these various premises was completed and a report submitted to the Secretary for Public Health under the power granted to the Medical Officer of Health to enter Crown land within the Municipal area for the purposes of reporting in terms of the Slums Act upon any premises on Government property.

Most of the defects discovered related to Native quarters and to unsatisfactory latrine accommodation. It is a matter of great satisfaction to this Department that the Railways Administration at once dealt with all the complaints raised.

2.—NEW DWELLINGS ERECTED.

(a) TOWNSHIP, ETC. (EXCLUDING NATIVE LOCATION).

Plans were finally approved by this Department for the erection of 182 dwellings (value £176,511), two blocks of flats (£12,600), 164 business and other premises (£163,814), and additions and alterations on 131 stands (£47,400). The Town Engineer has kindly supplied the figures relating to the value of the building plans approved during the year, which totalled to the sum of £400,32. As regards the dwellings, each included at least one brick room, with adequate sanitary accommodation, for Native employees.

(b) NATIVE LOCATION

Plans were approved for the erection by the Municipality, under the sub-economic housing loan scheme, of 20 brick semi-detached, and two detached, dwellings in the Location. These form the first instalment of houses intended by Council to take the place, in the newly-planned Location, of the existing insanitary collection of shacks.

Meanwhile Natives continued to erect their own wood-and-iron dwellings in the Location. During the year, 43 such houses were erected. The plans for these were considered and approved by the Location health inspector, and every care was taken to ensure that the best possible con-

struction, under the circumstances, would be done. But as, in the majority of cases, the structures are of wood-and-iron, usually second-hand material, and unlined, though they meet temporary requirements it is our experience that such dwellings become unfit for habitation within a few years.

Another difficulty experienced by these Natives, who are making a fine effort to improve their conditions while awaiting the construction of the permanent brick dwellings by the Municipality under the replanned Location scheme, is that their economic position often makes it impossible for them at one time to purchase sufficient material to complete the dwelling. Construction, therefore, is usually spread over a long period. At the end of June, 1938, on so many as 154 stands in the Location there were dwellings in various stages of construction. Work is continued as the financial position permits, and, in a large number of instances, the owner occupies the partly constructed building. In other cases a temporary room is erected and inhabited while the main dwelling is under construction—often for a period of years. 51 new earth closets on private premises were erected in the Location during the year.

3. INSANITARY DWELLINGS DEALT WITH

(a) **TOWNSHIP AREA.** — 68 rooms were demolished under instructions from this Department, and alterations or repairs were called for on 157 stands in the Township.

(b) **SEMI-RURAL AREAS.** — 51 rooms were demolished under instructions from the Department, and alterations or repairs were called for on eight properties in the semi-rural areas.

(c) **NATIVE LOCATION.** — 321 rooms were demolished after condemnation during the year.

4. GENERAL COMMENTS ON HOUSING IN SEMI-RURAL AREAS.

The attention given by the Department to these areas during the year has brought to light many defects which are dangerous to the public health. While the pensioner or householder with a steady income invests in a well-built brick house with the necessary brick out-buildings, there has been a tendency for these areas—where rates are low and land is cheaper—to encourage the European of low income to settle there. In too many instances the latter builds a house of two or three rooms while he is paying for the plot, and then adds to this building bit by bit. The result, not infrequently, is quite unsuitable for healthy housing.

But the worst nuisance in these areas has arisen from plot-holders who let small portions of their land to families of undesirable Natives. These Natives have, in the past, collected old tin, iron, wood, etc., from any refuse dump in the vicinity, to erect a crude shack which complies with none of the health regulations—deficient in light and cross-ventilation, they are too often the refuge of skokiaan queens and other troublesome characters, who create nuisances of a most unpleasant nature in the vicinity.

A further difficulty has arisen as the result of Native mealie sellers squatting, in the season, anywhere in the vicinity of a mine; they have neither sanitation nor water, and as soon as their stock has been sold they leave the site in a disgusting condition.

5. LOCATIONS ON MINE PROPERTIES.

While mine compounds, generally, were satisfactory, the conditions obtaining in some of the Locations on mine properties require attention, and will be surveyed during the coming year. The Locations within the Municipal area are on the following properties:—

1, New Kleinfontein G.M.; 2, Van Ryn Estates G.M.; 3, New Modder G.M.; 4, Modder Deep G.M.; 5, Van Ryn Deep G.M.



METEOROLOGICAL RECORDS

STATION 8/1682: BENONI MUNICIPAL COMPOUND:

ALTITUDE 5,400 FEET

LAT. 26°11'S. LONG. 28°19'E.

(a) ATMOSPHERIC TEMPERATURE

	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Year
Mean Daily Maximum	55.6	68.6	71.4	76.8	82.4	77.0	77.4	76.5	77.7	71.8	68.6	61.3	72.1
Mean Daily Minimum	32.9	40.6	46.1	52.5	54.3	56.3	58.5	54.9	53.7	50.4	43.6	37.2	48.4
Mean Daily Range ...	22.7	28.0	25.3	24.3	28.1	20.7	18.9	21.6	24.0	21.4	25.0	24.1	23.7
Greatest Daily Range...	40.0	31.8	34.0	26.5	41.6	23.6	28.6	32.8	29.5	29.0	34.0	35.6	41.6
Least Daily Range ...	18.2	20.4	13.4	9.6	15.2	5.2	11.9	11.2	13.7	10.0	10.5	4.9	4.9
Absolute Maximum ...	67.0	74.8	84.2	86.0	90.5	84.7	84.8	83.0	82.8	79.6	76.5	67.6	90.5
Absolute Minimum ...	21.5	31.0	29.0	42.0	44.0	47.0	54.6	46.1	49.2	40.0	31.5	31.5	21.5
Absolute Range ...	45.5	43.8	55.2	44.0	46.5	37.7	30.2	36.9	33.6	37.6	45.0	36.1	69.0

(b) RAINFALL, HUMIDITY, SUNSHINE, CLOUDINESS AND WIND

	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Year
Rainfall: Total Inches	0.00	0.00	1.32	1.43	1.12	8.22	2.70	1.63	1.23	4.85	0.27	0.29	23.06
No. of Rainy Days ...	—	—	4	7	7	22	11	8	5	9	2	5	80
Mean Daily Relative Humidity (%) ...	—	—	—	66	60	81	76	76	73	79	78	83	—
Cloudiness: Daily Average (Tenths) ...	3.5	3	4	4	3	7	5	5	2.5	4	2	4	4
Sunshine:													
Duration (Hours) ...	—	—	—	—	—	—	224	206	273	205	285	231	—
Hours per Day ...	—	—	—	—	—	—	7.2	7.4	8.8	6.8	9.2	7.7	—
Wind:													
From N. (Days) ...	6	8	4	9	9	10	13	12	14	5	2	2	94
N.E. („) ...	2	3	4	8	6	2	6	1	—	1	6	2	41
E. („) ...	1	1	4	4	—	—	4	3	6	3	2	5	33
S.E. („) ...	2	5	3	—	1	3	—	1	—	1	—	1	17
S. („) ...	1	—	—	—	—	—	1	2	—	—	—	—	4
S.W. („) ...	1	—	1	—	—	—	1	—	—	—	—	—	3
W. („) ...	3	1	1	—	—	—	—	—	—	—	—	—	5
N.W. („) ...	2	3	5	1	2	1	2	1	2	1	3	—	23
Calm Days ...	13	10	8	9	12	15	4	8	9	19	18	20	145

(b) POPULATION: IN DISTRICTS

(Estimated on Census Returns.)

	EUROPEAN			MINING NAT.			NON-MINING NATIVES			COLOURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	8,739	8,486	17,225	—	1,086	4,512	3,426	1,086	4,512	159	158	317	12	—	12	12,336	9,730	22,066
Location	4	—	4	—	6,130	11,924	5,794	6,130	11,924	615	575	1,190	499	407	906	6,912	7,112	14,024
Semi-Rural Areas	656	596	1,252	—	652	1,064	912	652	1,064	49	49	98	16	11	27	1,633	1,308	2,941
(A)	9,399	9,082	18,481	—	7,863	18,000	10,132	7,863	18,000	823	782	1,605	527	418	945	20,881	18,150	39,031
New Kleinfontein G.M....	285	248	533	5,585	378	814	436	378	814	1	3	4	4	1	5	6,311	630	6,941
Van Ryn Estates G.M....	198	152	350	3,708	126	325	199	126	325	15	15	30	11	3	14	4,131	296	4,427
Modder B. G.M.	602	342	944	4,824	399	870	471	399	870	60	42	102	1	1	2	5,958	784	6,742
Modder Deep G.M.	192	141	333	2,517	80	343	263	80	343	3	3	6	—	—	—	2,975	224	3,199
Modder East G.M.	216	144	360	—	52	121	69	52	121	—	—	—	—	—	—	285	196	481
New Modder G.M.	564	438	1,002	10,599	129	490	361	129	490	126	123	249	33	16	49	11,683	706	12,389
Van Run Deep G.M.	277	220	497	6,417	181	859	678	181	859	—	—	—	3	2	5	7,375	403	7,778
(B)	2,334	1,685	4,019	33,650	1,345	3,822	2,477	1,345	3,822	205	186	391	52	23	75	38,718	3,239	41,957
TOTAL	11,733	10,767	22,500	33,650	9,213	21,822	12,609	9,213	21,822	1,028	968	1,996	579	441	1,020	59,599	21,389	80,988

POPULATION

(Estimated on Census Returns.)

								MALE	FEMALE	TOTAL
EUROPEAN	...	...	...	...	...	...	...	11,733	10,767	22,500
MINING NATIVES—In Mine Compounds								33,650	—	33,650
NON-MINING NATIVES—On Mine Properties								2,477	1,345	3,822
In Location, etc.								10,132	7,868	18,000
Total								12,609	9,213	21,822
COLOURED	...	...	...	...	...	...	...	1,028	968	1,996
INDIAN	...	...	...	...	...	...	...	579	441	1,020
TOTAL: NON-EUROPEAN								47,866	10,622	58,488
TOTAL: ALL RACES								59,599	21,389	80,988

BIRTHS

(a) TOTAL BIRTHS IN MONTHS

	EURO-PEAN			NON-M NATIVES			COL-oured			INDIAN			TOTAL		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
July	26	14	40	10	26	36	1	6	7	1	2	3	38	48	86
August	27	27	54	6	19	25	5	2	7	2	0	2	40	48	88
September	21	21	42	19	11	30	0	0	0	5	2	7	45	34	79
October	21	17	38	17	15	32	9	6	15	0	3	3	47	41	88
November	26	15	41	18	14	32	4	1	5	1	4	5	49	34	83
December	25	25	50	5	7	12	4	3	7	2	2	4	36	37	73
January	32	31	63	17	16	33	2	2	4	4	1	5	55	50	105
February	25	16	41	15	15	30	3	4	7	1	3	4	44	38	82
March	19	23	42	9	20	29	2	6	8	4	2	6	34	51	85
April	25	28	53	10	10	20	6	2	8	1	0	1	42	40	82
May	21	17	38	13	6	19	1	2	3	1	1	2	36	26	62
June	28	21	49	12	15	27	3	4	7	3	2	5	46	42	88
TOTAL	296	255	551	151	174	325	40	38	78	25	22	47	512	489	1,001

(b) TOTAL BIRTHS IN DISTRICT

	EURO-PEAN			NON-M NATIVES			COL-oured			INDIAN			TOTAL		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	234	218	452	16	11	27	1	2	3	0	0	0	251	231	482
Location	0	0	0	132	151	283	33	27	60	17	22	39	182	200	382
Semi-Rural Areas	20	14	34	1	5	6	0	1	1	5	0	5	26	20	46
(A)	254	232	486	149	167	316	34	30	64	22	22	44	459	451	910
New Kleinfontein	8	3	11	0	0	0	0	0	0	0	0	0	8	3	11
Van Ryn Estates	1	2	3	1	2	3	0	0	0	1	0	1	3	4	7
Modder B	10	4	14	1	4	5	2	2	4	1	0	1	14	10	24
Modder Deep	3	1	4	0	1	1	0	0	0	0	0	0	3	2	5
Modder East	4	4	8	0	0	0	0	0	0	0	0	0	4	4	8
New Modder	13	8	21	0	0	0	4	6	10	1	0	1	18	14	32
Van Ryn Deep	3	1	4	0	0	0	0	0	0	0	0	0	3	1	4
(B)	42	23	65	2	7	9	6	8	14	3	0	3	53	38	91
TOTAL	296	255	551	151	174	325	40	38	78	25	22	47	512	489	1,001

(c) TOTAL ILLEGITIMATE BIRTHS

	EUROPEAN	NON-MINING NATIVES	COLOURED	INDIAN	TOTAL
MALE	4	50	10	—	64
FEMALE	2	50	9	—	61
TOTAL	6	100	19	—	125

(d) BIRTH RATES, ETC.

	BIRTH RATES		ILLEGITIMACY RATES	MASCULINITY RATES
	(Births per 1,000 population)	(Births per 1,000 women 15-44 years)	(% illeg. to Total Births)	(Males : Females)
European	24.49	98.2	1.09	116 : 100
Non-European ...	7.7	—	26.4	92 : 100
Natives—Non-Mines	(14.9)	—	30.8	87 : 100
Coloured	39.1	175.7	24.4	105 : 100
Indian	46.1	268.6	—	114 : 100
All Races	12.4	—	12.5	105 : 100

545 legitimate European births per 3,432 married European women aged 15—44 years = 159.0 legitimate births per 1,000 married women of conceptive age.

Six illegitimate European births per 2,181 unmarried and widowed European women aged 15.44 years = 2.75 illegitimate births per 1,000 unmarried and widowed women of conceptive age.

DEATHS

(a) TOTAL IN MONTHS

	EURO- PEAN			MIN. NAT.	NON-MIN. NATIVES			COL- OURED			INDIAN			TOTAL		
	M.	F.	T.	MALES	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
July	10	4	14	26	16	17	33	2	4	6	1	0	1	55	25	30
August	14	7	21	21	13	8	21	1	0	1	0	0	0	49	15	64
September	13	8	21	22	16	9	25	2	2	4	0	0	0	53	19	72
October	4	5	9	10	11	12	23	1	1	2	2	0	2	28	18	46
November	9	7	16	16	31	24	55	1	3	4	2	2	4	59	36	95
December	10	6	16	23	32	20	52	2	3	5	1	2	3	68	31	99
January	7	3	10	17	24	18	42	0	2	2	0	1	1	48	24	72
February	6	2	8	10	31	26	57	1	1	2	0	0	0	47	29	76
March	9	6	15	20	33	22	55	1	1	2	4	1	5	68	30	98
April	8	5	13	14	17	10	27	0	1	1	0	1	1	39	17	56
May	7	5	12	19	13	10	23	1	2	3	2	1	3	42	18	60
June	8	8	16	18	15	21	36	4	0	4	4	2	6	49	31	80
TOTAL	105	66	171	216	252	197	449	16	20	36	16	10	26	605	293	898

(b) DEATH RATES
(Deaths per 1,000 population)

	Males	Females	Total
EUROPEAN	8·94	6·14	7·60
NATIVE—MINES	6·42	0·00	6·42
NATIVE—NON-MINES	20·00	21·38	20·58
COLOURED	15·56	20·66	18·04
INDIAN	27·75	22·37	25·49
ALL NON-EUROPEAN	10·45	21·35	12·43
ALL RACES	10·15	13·70	11·09

DEATHS OF CHILDREN UNDER 5 YEARS
PER 1,000 CHILDREN LIVING UNDER 5

European	20·93
Non-Mining Natives	—
Coloured	53·6
Indian	100·0

(c) TOTAL IN AGE GROUPS

	EURO- PEAN			MIN. NAT.	NON-MIN. NATIVES			COL- OURED			INDIAN			TOTAL		
	M.	F.	T.	MALES	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
0	21	15	36	0	113	104	217	5	5	10	6	4	10	145	128	273
1	2	2	4	0	42	28	70	0	3	3	2	2	4	46	35	81
2	1	3	4	0	9	6	15	1	0	1	2	0	2	13	9	22
3	0	0	0	0	7	2	9	1	0	1	0	0	0	8	2	10
4	1	0	1	0	2	1	3	0	0	0	0	0	0	3	1	4
5-9	3	1	4	0	6	1	7	1	0	1	0	0	0	10	2	12
10-14	1	0	1	0	6	2	8	1	1	2	0	0	0	8	3	11
15-19	1	1	2	9	5	4	9	1	1	2	0	1	1	16	7	23
20-24	3	0	3	33	4	8	12	1	2	3	0	0	0	41	10	51
25-29	2	1	3	64	7	9	16	0	1	1	0	2	2	78	13	91
30-34	4	2	6	42	7	9	16	1	0	1	0	0	0	54	11	65
35-39	3	5	8	17	8	3	11	0	0	0	1	0	1	29	8	37
40-44	4	4	8	28	6	5	11	0	2	2	0	1	1	38	12	50
45-49	12	3	15	10	12	3	15	0	1	1	0	0	0	34	7	41
50-54	9	4	13	8	7	6	13	1	0	1	2	0	2	27	10	37
55-59	9	2	11	2	1	1	2	0	0	0	1	0	1	13	3	16
60-64	7	7	14	1	2	1	3	1	2	3	1	0	1	12	10	22
65-69	9	5	14	1	0	2	2	0	0	0	0	0	0	10	7	17
70-74	2	5	7	1	3	1	4	0	1	1	1	0	1	7	7	14
75-79	2	4	6	0	2	0	2	0	0	0	0	0	0	4	4	8
80-up	4	2	6	0	3	1	4	2	1	3	0	0	0	9	4	13
	105	66	171	216	252	197	449	16	20	36	16	10	26	605	293	898

(d) TOTAL IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			TOTAL		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	76	58	134	14	5	19	2	0	2	0	0	0	92	63	155
Location	0	0	0	205	170	375	9	20	29	15	9	24	229	199	428
Semi-Rural Areas	10	1	11	21	6	27	1	0	1	0	0	0	32	7	39
(A)	86	59	145	240	181	421	12	20	32	15	9	24	353	269	622
New Kleinfontein	4	1	5	54	2	56	0	0	0	0	0	0	58	3	61
Van Ryn Estates	2	1	3	19	5	24	0	0	0	0	0	0	21	6	27
Modder B	3	2	5	36	4	40	2	0	2	1	0	1	42	6	48
Modder Deep	1	0	1	11	2	13	0	0	0	0	0	0	12	2	14
Modder East	1	0	1	1	0	1	0	0	0	0	0	0	2	0	2
New Modder	7	2	9	65	3	68	2	0	2	0	1	1	74	6	80
Van Ryn Deep	1	1	2	42	0	42	0	0	0	0	0	0	43	1	44
(B)	19	7	26	228	16	244	4	0	4	1	1	2	255	24	276
TOTAL	105	66	171	468	197	665	16	20	36	16	10	26	605	293	898

(e) DETAILED CAUSES OF DEATH

		EURO- PEAN			MINING NATIVES	NON- MINING NATIVES			COL- OURED			IN- DIAN			ALL RACES		
		M.	F.	T.	Males	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
<i>Infectious Diseases:</i>																	
001	Enteric Fever	3	0	3	11	8	0	8	0	0	0	0	0	0	22	0	22
008	Measles	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	2
010	Whooping Cough	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
011	Diphtheria	0	1	1	0	1	0	1	0	0	0	0	0	0	1	1	2
012	Influenza (Lungs)	4	0	4	7	4	2	6	0	0	0	0	0	0	15	2	17
013	Influenza (not Lungs)	2	0	2	2	0	0	0	0	0	0	0	0	0	4	0	2
015	Amoebic Dysentery...	0	0	0	1	1	1	2	0	0	0	0	0	0	2	1	3
022	Erysipelas	0	0	0	2	0	1	1	0	0	0	0	0	0	2	1	3
024	Enceph. Lethargica...	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
025	C. Spinal Meningitis	1	0	1	7	0	0	0	0	0	0	0	0	0	8	0	8
030	Tuberculosis, Lungs	0	0	0	6	16	12	28	1	3	4	2	1	3	25	16	41
031	,, Nerves	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
032	,, Intestines	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
036	,, Glands	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
038	,, other Organs	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2
039	Disseminated T.B. ...	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
042	Syphilis	1	1	2	0	0	6	6	0	1	1	0	0	0	1	8	9
045	Septicaemia	0	1	1	4	0	1	1	0	0	0	0	0	0	4	2	6
047	Malaria	2	0	2	2	0	0	0	0	0	0	0	0	0	4	0	4
TOTAL: I		13	4	18	45	35	23	58	1	4	5	2	1	3	97	32	129
II <i>Malignant Tumours:</i>																	
101	Cancer, Digest. Organs	4	2	6	0	0	0	0	0	0	0	1	0	1	5	2	7
103	,, Uterus	0	0	0	0	0	1	1	0	1	1	0	0	0	0	2	2
104	,, Ovary	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
106	,, Breast	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2	2
107	,, Prostrate	0	0	0	1	1	0	1	1	0	1	0	0	0	3	0	3
108	,, Lip	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
109	,, other Organs	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	2
TOTAL: II		6	6	12	1	1	1	2	1	1	2	1	0	1	10	8	18
III <i>Rheumatism, etc.:</i>																	
149	Rheumatic Fever	0	0	0	0	1	0	1	0	0	0	1	0	1	2	0	2
150	Rheumatism, Heart	1	0	1	0	2	2	4	1	0	1	0	0	0	4	2	6
151	Chronic Rheumatism	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
153	Diabetes	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
161	Exophth. Goitre	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
163	Tetany	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2
TOTAL: III		2	1	3	0	3	5	8	1	0	1	1	0	1	7	6	13
IV <i>Diseases of Blood:</i>																	
200	Purpura	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
TOTAL: IV		0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
V <i>Chronic Poisonings:</i>																	
250	Alcoholism	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL: V		0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
VI <i>Nervous System:</i>																	
301	Simple Meningitis ...	0	0	0	4	2	0	2	1	0	1	1	0	1	8	0	8
304	Cerebral Haemorrhage	2	3	5	1	0	0	0	1	0	1	0	0	0	4	3	7
305	,, Embolism	0	1	1	0	1	0	1	0	1	1	0	0	0	1	2	3
306	Hemiplegia	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
310	Epilepsy	1	0	1	3	0	0	0	0	0	0	0	0	0	4	0	4
311	Infant Convulsions ...	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	2
TOTAL: VI		4	4	8	8	4	1	5	2	1	3	1	0	1	19	6	25

Detailed Causes of Death—Continued

	EURO- PEAN			MINING NATIVES	NON- MINING NATIVES			COL- OURED			IN- DIAN			ALL RACES		
	M.	F.	T.		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
VII Diseases of Circulatory System:																
350 Pericarditis	1	0	1	3	0	0	0	0	0	0	0	0	0	4	0	4
351 Acute Endocarditis...	0	1	1	1	0	0	0	0	0	0	0	0	0	1	1	2
352 Valv. Disease of Heart	1	1	2	0	1	1	2	0	0	0	1	0	1	3	3	6
353 Acute Myocarditis ...	0	1	1	3	2	2	4	0	1	1	0	0	0	5	4	9
354 Fatty Heart	0	1	1	0	0	1	1	0	0	0	0	0	0	0	2	2
355 Other Myocarditis ...	4	3	7	1	7	1	8	1	1	2	0	0	0	13	5	18
356 Angina Pectoris ...	4	0	4	3	0	2	2	0	0	0	0	0	0	7	2	9
357 Other Dis. of Heart	5	5	10	0	1	5	6	0	0	0	0	0	0	6	10	16
358 Aneurysm	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
359 Arterio-Sclerosis ...	1	1	2	0	0	0	0	0	1	1	0	0	0	1	2	3
363 Disease of Veins ...	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL: VII ...	16	13	29	13	11	13	24	1	3	4	1	0	1	42	29	71
VIII Diseases of Respiratory System:																
401 Laryngitis	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1
402 Acute Bronchitis ...	2	0	2	0	13	11	24	0	1	1	1	0	1	16	12	28
403 Chronic Rheumatism	1	1	2	1	1	0	1	0	0	0	0	0	0	3	1	4
404 Broncho-Pneumonia	7	6	13	4	43	43	85	3	4	7	2	5	7	59	58	117
405 Lobar Pneumonia ...	5	4	9	71	16	4	20	1	0	1	0	0	0	93	8	101
406 Pneumonia	2	2	4	1	0	0	0	1	0	1	0	0	0	4	2	6
407 Empyaema	2	0	2	0	0	0	0	0	0	0	0	0	0	2	0	2
409 Pulmonary Congestion	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1
410 Asthma	0	2	2	0	0	1	1	0	0	0	0	0	0	0	3	3
412 Other Respiratory Dis.	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
413 Silicosis (no T.B.) ...	7	0	7	0	0	0	0	0	0	0	0	0	0	7	0	7
414 „ (with T.B.)	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL: VIII ...	28	15	43	77	73	59	132	6	5	11	4	5	9	188	84	272
IX Diseases of Digestive System:																
450 Vincent's Angina ...	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
451 Tonsillitis	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
455 Gastritis	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
456 Enteritis (under 2)...	2	3	5	0	75	52	127	1	2	3	2	1	3	80	58	138
457 „ (2 and over)	1	1	2	1	7	3	10	0	1	1	1	0	1	10	5	15
458 Appendicitis	0	1	1	1	0	1	1	0	0	0	0	0	0	1	2	3
459 Hernia	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
460 Intestinal Obstruct.	1	2	3	2	3	0	3	0	0	0	0	0	0	6	2	8
463 Cirrhosis Liver ...	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
464 Ac. Yellow Atrophy	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
465 Abcess of Liver ...	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
467 Cholangitis	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
469 Peritonitis	1	0	1	4	0	0	0	0	0	0	0	0	0	5	0	5
TOTAL: IX ...	6	10	16	11	86	56	142	1	3	4	3	1	4	107	70	177
X Diseases of Kidneys, etc.:																
500 Acute Nephritis ...	1	2	2	1	1	0	1	0	0	0	0	0	0	3	1	4
501 Chronic Nephritis ...	2	1	3	0	1	0	1	0	0	0	0	1	1	3	2	5
503 Pyelo-Nephritis ...	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
510 Salpingitis	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
511 Endometritis	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
TOTAL: X ...	3	2	5	1	2	3	5	0	0	0	0	1	1	6	6	12
XI Diseases of Pregnancy:																
552 Ectopic Gestation ...	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	2
554 Puerp. Haemorrhage	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2
559 Retained Placenta ...	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1

Detailed Causes of Death—Continued

	EURO- PEAN			MINING NATIVES	NON- MINING NATIVES			COL- OURED			IN- DIAN			ALL RACES		
	M.	F.	T.		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
TOTAL: XI ...	0	0	0	0	0	4	4	0	0	0	0	1	1	0	5	5
XII <i>Diseases of Skin:</i>																
601 Cellulitis ...	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
TOTAL: XII ...	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
XIII <i>Congenital Malformations:</i>																
701 Meningocoele ...	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
702 Congenital Heart ...	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
TOTAL: XIII ...	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	2
XIV <i>Diseases of Early Infancy:</i>																
750 Congenital Debility...	0	1	1	0	5	5	10	1	0	1	1	0	1	7	6	13
751 Premature Birth ...	5	3	8	0	12	11	23	0	1	1	1	0	1	18	15	33
752 Injury at Birth ...	4	0	4	0	2	2	4	0	0	0	0	0	0	6	2	8
753 Other Infant Diseases	3	4	7	0	6	5	11	0	0	0	0	0	0	9	9	18
TOTAL: XIV ...	12	8	20	0	25	23	48	1	1	2	2	0	2	40	32	72
XV 800 <i>Old Age</i> ...	0	1	1	0	2	0	2	0	0	0	0	0	0	2	1	3
TOTAL: XV ...	0	1	1	0	2	0	2	0	0	0	0	0	0	2	1	3
XVI <i>Violence:</i>																
850 Suicide, Poisoning ...	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
852 „ Hanging ...	1	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2
855 „ Knife ...	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
859 Infanticide ...	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
860 Homicide, Firearms	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
816 „ Knives ...	0	0	0	2	1	0	1	0	0	0	0	0	0	3	0	3
862 „ other means	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
866 Accident. Poisoning	1	0	1	0	0	1	1	0	0	0	0	0	0	1	1	2
868 „ Burns ...	2	0	2	1	0	4	4	0	1	1	0	0	0	3	5	8
870 „ Drowning	1	0	1	0	0	0	0	0	0	0	0	1	1	1	1	2
873 Accid. Injury in Mines	3	0	3	44	0	0	0	0	0	0	0	0	0	47	0	47
878 Railway Accidents ...	0	0	0	2	0	1	1	0	0	0	0	0	0	2	1	3
877 Motor Accidents ...	4	1	5	3	4	1	5	0	0	0	1	0	1	12	2	14
880 Road Accidents ...	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
883 Accid. Injury by Fall	1	0	1	1	1	0	1	1	0	1	0	0	0	4	0	4
892 Electricity ...	0	1	1	0	0	0	0	1	0	1	0	0	0	1	1	2
TOTAL: XVI ...	14	2	16	57	7	7	14	2	2	4	1	1	2	81	12	93
XVI <i>Ill-Defined</i> ...	0	0	0	2	1	0	1	0	0	0	0	0	0	3	0	3
TOTAL: XVI ...	0	0	0	2	1	0	1	0	0	0	0	0	0	3	0	3
GRAND TOTAL ...	105	66	171	216	252	197	449	16	20	36	16	10	26	605	293	898

(f) DEATH RATES: VARIOUS CAUSES
(According to Short List of Census Office)

	ALL RACES	EUR.	NATIVES		COL.	IND.	ALL NON- EUR.	1931-36 ALL RACES
			Mines	NON-MIN.				
1. Enteric Fever	0·27	0·13	0·33	0·37	—	—	0·33	(0·79)
2. Typhus	0·00	—	—	—	—	—	—	(0·00)
3. Smallpox	0·00	—	—	—	—	—	—	(0·00)
4. Measles	0·02	—	—	0·09	—	—	0·03	(0·06)
5. Scarlet Fever	0·00	—	—	—	—	—	—	(0·01)
6. Whooping Cough	0·01	0·04	—	—	—	—	—	(0·23)
7. Diphtheria	0·02	0·04	—	0·05	—	—	0·02	(0·04)
8. Influenza	0·26	0·27	0·27	0·28	—	—	0·26	(0·38)
9. Dysentery	0·03	—	0·03	0·09	—	—	0·05	(0·26)
10. C. Spinal Meningitis ...	0·10	0·04	0·21	—	—	—	0·12	(0·13)
11. Pulmonary Tuberculosis ...	0·53	0·04	0·18	1·28	2·00	2·94	0·70	(0·72)
12. T.B. Meningitis	0·01	—	—	0·05	—	—	0·02	(0·02)
13. Other Tuberculosis	0·06	—	0·09	0·09	—	—	0·09	(0·06)
14. Leprosy	0·00	—	—	—	—	—	—	(0·00)
15. Syphilis	0·11	0·09	—	0·27	0·50	—	0·12	(0·17)
16. Malaria	0·05	0·09	0·06	—	—	—	0·03	(0·01)
17. Cancer	0·22	0·53	0·03	0·09	1·00	0·98	0·10	(0·28)
18. Cerebral Haemge. (304-305)	0·12	0·27	0·03	0·05	1·00	—	0·07	(0·19)
19. Heart Disease (350-357)	0·81	1·19	0·33	1·10	1·50	0·98	0·67	(0·91)
20. Bronchitis	0·39	0·18	0·03	1·15	0·50	0·98	0·48	(0·59)
21. Pneumonia	2·76	1·15	2·26	4·85	4·51	6·86	3·39	(3·47)
22. Silicosis (No T.B.)	0·08	0·31	—	—	—	—	—	(0·12)
23. Silicosis (with T.B.) ...	0·01	0·04	—	—	—	—	—	(0·03)
24. Other Respiratory Disease	0·10	0·22	—	0·05	0·50	0·98	0·05	(0·13)
25. Ulcer, Stomach or Duod.	0·00	—	—	—	—	—	—	(0·001)
26. Diarr. & Enteritis (under 2)	1·70	0·22	—	5·82	1·50	2·94	2·27	(2·57)
27. Appendicitis	0·04	0·04	0·03	0·05	—	—	0·03	(0·08)
28. Cirrhosis of Liver	0·01	0·04	—	—	—	—	—	(0·04)
29. Nephritis	0·11	0·22	0·03	0·09	—	0·98	0·07	(0·20)
30. Puerperal Sepsis	0·00	—	—	—	—	—	—	(0·09)
31. Other Acc. & Dis. of Preg.	0·06	—	—	0·18	—	0·98	0·09	(0·07)
32. Congenital Malformations	0·02	—	—	0·09	—	—	0·03	(0·03)
33. Diseases of Early Infancy	0·89	0·89	—	2·20	1·00	1·96	0·89	(1·15)
34. Suicide	0·05	0·04	0·06	—	0·50	—	0·05	(0·04)
35. Mine Accidents	0·58	0·13	1·31	—	—	—	0·75	(0·74)
Road Accidents	0·18	0·22	0·12	0·23	—	0·98	0·17	(0·17)
Other Violent Deaths ...	0·33	0·31	0·21	0·41	1·50	0·98	0·34	(0·26)
36. Other Defined Causes ...	1·17	0·90	0·75	1·60	2·03	2·95	0·96	(1·66)
37. Ill-defined or Unknown ...	0·04	—	0·06	0·05	—	—	0·05	(0·04)
ALL CAUSES	11·09	7·60	6·42	20·58	18·04	25·49	12·03	(15·74)

INFANTILE MORTALITY

(a) TOTAL INFANTILE DEATHS IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	16	13	29	4	3	7	0	0	0	0	0	0	20	16	36
Location	0	0	0	95	86	181	3	5	8	5	4	9	103	95	198
Semi-Rural Areas	4	1	5	5	3	8	1	0	1	0	0	0	10	4	14
(A)	20	14	34	104	92	196	4	5	9	5	4	9	133	115	248
New Kleinfontein	0	0	0	2	1	3	0	0	0	0	0	0	2	1	3
Van Ryn Estates	0	0	0	0	4	4	0	0	0	0	0	0	0	4	4
Modder B	0	0	0	4	4	8	0	0	0	1	0	1	5	4	9
Modder Deep	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2
Modder East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Modder	1	1	2	3	1	4	1	0	1	0	0	0	5	2	7
Van Ryn Deep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(B)	1	1	2	9	12	21	1	0	1	1	0	1	12	13	25
TOTAL	21	15	36	113	104	217	5	5	10	6	4	10	145	128	273

(b) CAUSES OF INFANTILE DEATH

	EUROPEAN			NON- MINING NATIVES			COLOURED			INDIAN		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
008 Measles	—	—	—	1	—	1	—	—	—	—	—	—
011 Diphtheria	—	—	—	1	—	1	—	—	—	—	—	—
015 Amoebic Dysentery ...	—	—	—	1	—	1	—	—	—	—	—	—
042 Syphilis	1	—	1	—	5	5	—	—	—	—	—	—
045 Septicaemia	—	—	—	—	1	1	—	—	—	—	—	—
163 Tetany	—	—	—	—	2	2	—	—	—	—	—	—
200 Purpura	—	—	—	—	1	1	—	—	—	—	—	—
301 Meningitis	—	—	—	2	—	2	—	—	—	—	—	—
311 Convulsions	—	—	—	1	1	2	—	—	—	—	—	—
402 Bronchitis	2	—	2	4	7	11	—	1	1	1	—	1
404 Broncho-Pneumonia ...	3	3	6	21	23	44	2	2	4	2	3	5
405 Lobar Pneumonia ...	1	—	1	1	—	1	—	—	—	—	—	—
406 Pneumonia	—	1	1	—	—	—	1	—	1	—	—	—
456 Enteritis	2	2	4	54	41	95	1	1	2	1	1	2
460 Intestinal Obstruction...	—	—	—	1	—	1	—	—	—	—	—	—
500 Nephritis	—	1	1	—	—	—	—	—	—	—	—	—
701 Meningocoele	—	—	—	1	—	1	—	—	—	—	—	—
750 Congenital Debility ...	—	1	1	5	5	10	1	—	1	1	—	1
751 Prematurity	5	3	8	12	11	23	—	1	1	1	—	1
752 Injury at Birth	2	—	2	—	—	—	—	—	—	—	—	—
Cerebral Haemorrhage...	2	—	2	2	2	4	—	—	—	—	—	—
753 Umbilical Haemorrhage	—	—	—	3	2	5	—	—	—	—	—	—
Asphyxia Neonatorum	1	1	2	—	—	—	—	—	—	—	—	—
Pemphigus Neonatorum	1	—	1	1	—	1	—	—	—	—	—	—
Ict. Haem. Neonatorum	—	—	—	—	1	1	—	—	—	—	—	—
Impetigo Neonatorum...	—	1	1	—	—	—	—	—	—	—	—	—
Diaphragm Hernia ...	1	—	1	—	—	—	—	—	—	—	—	—
Oedema Lungs	—	—	—	—	1	1	—	—	—	—	—	—
Inspiratory Pneumonia	—	1	1	—	—	—	—	—	—	—	—	—
Septic Umbilicus	—	—	—	1	—	1	—	—	—	—	—	—
Eclampsia	—	1	1	—	—	—	—	—	—	—	—	—
859 Infanticide	—	—	—	1	—	1	—	—	—	—	—	—
866 Accidental Poisoning ...	—	—	—	—	1	1	—	—	—	—	—	—
TOTAL	21	15	36	113	104	217	5	5	10	6	4	10

(c) DEATHS IN CERTAIN AGE GROUPS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1st day	9	4	13	7	3	10	0	1	1	0	0	0	16	8	24
Rest of 1st week	2	1	3	11	9	20	0	0	0	0	1	1	13	11	24
Rest of 1st month	4	1	5	13	23	36	1	0	1	3	1	4	21	25	46
2nd 6th mths. (in.)	4	7	11	47	41	88	3	2	5	2	1	3	56	51	107
7th 12th mths. (in.)	2	2	4	35	28	63	1	2	3	1	1	2	39	33	72
TOTAL	21	15	36	113	104	217	5	5	10	6	4	10	145	128	273

(d) INFANTILE MORTALITY RATES

EUROPEAN: Males	70.9	
Females	58.8	65.3
NATIVE: Males	(748)	
Females	(600)	(668) *
COLOURED: Males	125.0	
Females	134.2	128.2
INDIAN: Males	240.0	
Females	181.8	212.8

* Native Infantile Mortality Rate is unreliable because of inadequate registration of births.

(e) VARIOUS CAUSES OF INFANTILE DEATH
(Expressed as percentages)

	EURO- PEAN	NATIVE	COL- OURED	INDIAN	ALL RACES
Bowel Infections	11	44.0	20	20	38.0
Syphilis	3	2.0	0	0	2.0
Whooping Cough	0	0.0	0	0	0.0
Other Infectious Diseases	0	1.0	0	0	1.0
Bronchitis and Pneumonia	28	26.0	60	60	29.0
Congenital Debility ...	3	4.5	10	10	4.5
Premature Birth	22	11.0	10	10	12.0
Injury at Birth	11	2.0	0	0	3.0
Congenital Malformations	0	0.5	0	0	0.5
Other Infantile Diseases	22	9.0	0	0	10.0
	100	100.0	100	100	100.0

MATERNAL MORTALITY

(a) TOTAL DEATHS: IN CAUSES

	EURO- PEAN	NATIVE	COL- OURED	INDIAN	TOTAL
TOTAL : Septic	0	0	0	0	0
Ectopic Gestation... ..	0	1	0	1	2
Pueperal Haemorrhage	0	2	0	0	2
Other Accidents of Birth	0	1	0	0	1
TOTAL : Non-Septic ...	0	4	0	1	5
TOTAL	0	4	0	1	5

(b) TOTAL DEATHS: IN AGE GROUPS

	SEPTIC					NON-SEPTIC				
	EURO- PEAN	NATIVE	COL- OURED	INDIAN	TOTAL	EURO- PEAN	NATIVE	COL- OURED	INDIAN	TOTAL
15-19	—	—	—	—	0	—	—	—	—	0
20-24	—	—	—	—	0	—	1	—	—	1
25-29	—	—	—	—	0	—	3	—	1	4
30-34	—	—	—	—	0	—	—	—	—	0
35-39	—	—	—	—	0	—	—	—	—	0
40-44	—	—	—	—	0	—	—	—	—	0
45-49	—	—	—	—	0	—	—	—	—	0
	0	0	0	0	0	—	4	0	1	5

(c) DEATH RATES PER 1,000 LIVE BIRTHS

					SEPTIC	NON-SEPITC	ALL CAUSES
EUROPEAN	...	...	...	...	—	—	—
NATIVE	...	...	...	...	—	12·3	12·3
COLOURED	...	...	...	...	—	—	—
INDIAN	...	...	...	...	—	21·3	21·3
ALL RACES	...	...	...	...	0·0	5·0	5·0

PULMONARY TUBERCULOSIS

(Including Silicosis with T.B.)

(a) NOTIFICATIONS: IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	2	2	4	3	0	3	0	0	0	—	—	—	5	2	7
Location	—	—	—	16	19	35	3	1	4	1	0	1	20	20	40
Semi-Rural Areas	1	0	1	2	0	2	—	—	—	—	—	—	3	0	3
(A)	3	2	5	21	19	40	3	1	4	1	0	1	28	22	50
New Kleinfontein	—	—	—	0	0	0	—	—	—	—	—	—	0	0	0
Van Ryn Estates	—	—	—	7	0	7	—	—	—	—	—	—	7	0	7
Modder B	—	—	—	11	0	11	—	—	—	—	—	—	11	0	11
Modder Deep	—	—	—	7	0	7	—	—	—	—	—	—	7	0	7
Modder East	1	0	1	0	0	0	—	—	—	—	—	—	1	0	1
New Modder	—	—	—	22	0	22	—	—	—	—	—	—	22	0	22
Van Ryn Deep	—	—	—	5	0	5	—	—	—	—	—	—	5	0	5
(B)	1	0	1	52	0	52	0	0	0	0	0	0	53	0	53
TOTAL	4	2	6	73	19	92	3	1	4	1	0	1	81	22	103

(b) DEATHS: IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	1	0	1	0	0	0	—	—	—	—	—	—	1	0	1
Location	—	—	—	15	12	27	1	3	4	2	1	3	18	16	34
Semi-Rural Areas	0	0	0	1	0	1	—	—	—	—	—	—	1	0	1
(A)	1	0	1	16	12	28	1	3	4	2	1	3	20	16	36
New Kleinfontein	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
Van Ryn Estates	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
Modder B	—	—	—	2	0	2	—	—	—	—	—	—	2	0	2
Modder Deep	—	—	—	1	0	1	—	—	—	—	—	—	1	0	1
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
New Modder	—	—	—	3	0	3	—	—	—	—	—	—	3	0	3
Van Ryn Deep	—	—	—	1	0	1	—	—	—	—	—	—	1	0	1
(B)	—	—	—	7	0	7	0	0	0	0	0	0	7	0	7
TOTAL	1	0	1	23	12	35	1	3	4	2	1	3	27	16	43

(c) INCIDENCE AND DEATH RATES

						INCIDENCE RATES (Notifications per 1,000 population)	DEATH RATES (Deaths per 1,000 population)
EUROPEANS ... ..	...	...	...	...	...	0·27	0·04
NATIVES—MINES ... ..	...	...	...	...	...	1·54	0·18
NATIVES—NON-MINING ... ..	...	...	...	...	...	1·83	1·28
COLOURED ... ..	...	...	...	...	...	2·00	2·00
INDIAN ... ..	...	...	...	...	...	0·98	2·94
ALL NON-EUROPEANS ... ..	...	...	...	...	...	1·66	0·70
ALL RACES ... ..	...	...	...	...	...	1·27	0·53

LUNG DISEASES (Non-Tubercular)

(Excluding Influenza)

(a) TOTAL DEATHS: IN MONTHS

	EURO-PEAN			MIN. NAT.	NON-MIN. NATIVES			COL-oured			INDIAN			ALL RACES		
	M.	F.	T.	MALES	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
July	2	2	4	14	9	5	14	1	1	2	—	—	—	26	8	34
August	4	2	6	11	6	3	9	1	0	1	—	—	—	22	5	27
September	3	1	4	8	9	2	11	—	—	—	—	—	—	20	3	23
October	1	2	3	3	5	6	11	—	—	—	1	0	1	10	8	18
November	1	1	2	7	7	8	15	0	1	1	0	2	2	15	12	27
December	2	0	2	7	6	2	8	1	0	1	0	2	2	16	4	20
January	1	1	2	4	6	2	8	—	—	—	—	—	—	11	3	14
February	1	0	1	3	3	4	7	0	1	1	—	—	—	7	5	12
March	2	2	4	7	6	12	18	—	—	—	2	1	3	17	15	32
April	2	0	2	2	4	4	8	0	1	1	—	—	—	8	5	13
May	1	2	3	8	7	4	11	0	1	1	1	0	1	17	7	24
June	6	2	8	3	5	7	12	3	0	3	—	—	—	17	9	26
TOTAL	26	15	41	77	73	59	132	6	5	11	4	5	9	186	84	270

(b) TOTAL DEATHS: IN DISTRICTS

	EURO-PEAN			NATIVE			COL-oured			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	16	13	29	6	2	8	—	—	—	—	—	—	22	15	37
Location	—	—	—	52	48	100	4	5	9	4	5	9	60	58	118
Semi-Rural Areas	4	0	4	10	2	12	1	0	1	—	—	—	15	2	17
(A)	20	13	33	68	52	120	5	5	10	4	5	9	97	75	172
New Kleinfontein	1	0	1	27	1	28	—	—	—	—	—	—	28	1	29
Van Ryn Estates	—	—	—	10	3	13	—	—	—	—	—	—	10	3	13
Modder B	1	0	1	14	1	15	1	0	1	—	—	—	16	1	17
Modder Deep	—	—	—	2	2	4	—	—	—	—	—	—	2	2	4
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
New Modder	3	2	5	17	0	17	—	—	—	—	—	—	20	2	22
Van Ryn Deep	1	0	1	12	0	12	—	—	—	—	—	—	13	0	13
(B)	6	2	8	82	7	89	1	0	1	0	0	0	89	9	98
TOTAL	26	15	41	150	59	209	6	5	11	4	5	9	186	84	270

(c) DEATH RATES PER 1,000 POPULATION
PER ANNUM

EUROPEAN	1.82
MINING NATIVES	2.29
NON-MINING NATIVES	6.05
COLOURED	5.51
INDIAN	8.82
ALL NON-EUROPEAN	3.92
ALL RACES	3.32

TOTAL OF ACUTE INTESTINAL INFECTIONS

(Including Enteric, Enteritis and Dysentery)

(a) TOTAL DEATHS: IN MONTHS

	EURO-PEAN			MIN. NAT.	NON-MIN. NATIVES			COL-oured			INDIAN			ALL RACES		
	M.	F.	T.	MALES	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
July	—	—	—	—	1	0	1	—	—	—	—	—	—	1	0	1
August	—	—	—	2	2	0	2	—	—	—	—	—	—	4	0	4
September	—	—	—	—	1	2	3	—	—	—	—	—	—	1	2	3
October	—	—	—	—	2	1	3	—	—	—	—	—	—	2	1	3
November	3	1	4	1	18	9	27	—	—	—	1	0	1	23	10	33
December	1	2	3	—	15	12	27	0	1	1	1	0	1	17	15	32
January	1	1	2	3	13	11	24	0	2	2	—	—	—	17	14	31
February	1	0	1	1	16	14	30	—	—	—	—	—	—	18	14	32
March	—	—	—	4	16	4	20	1	0	1	1	0	1	22	4	26
April	—	—	—	1	4	0	4	—	—	—	—	—	—	5	0	5
May	—	—	—	—	3	1	4	—	—	—	—	—	—	3	1	4
June	—	—	—	1	0	2	2	—	—	—	0	1	1	1	3	4
TOTAL	6	4	10	13	91	56	147	1	3	4	3	1	4	114	64	178

(b) TOTAL DEATHS IN DISTRICTS

	EURO-PEAN			NATIVE			COL-oured			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	4	2	6	1	1	2	—	—	—	—	—	—	5	3	8
Location	—	—	—	87	51	138	—	3	3	3	1	4	90	55	145
Semi-Rural Areas	2	2	4	0	1	1	—	—	—	—	—	—	2	3	5
(A)	6	4	10	88	53	141	0	3	3	3	1	4	97	61	158
New Kleinfontein	—	—	—	6	1	7	—	—	—	—	—	—	6	1	7
Van Ryn Estates	—	—	—	1	0	1	—	—	—	—	—	—	1	0	1
Modder B	—	—	—	2	1	3	—	—	—	—	—	—	2	1	3
Modder Deep	—	—	—	1	0	1	—	—	—	—	—	—	1	0	1
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
New Modder	—	—	—	3	1	4	1	—	1	—	—	—	4	1	5
Van Ryn Deep	—	—	—	3	0	3	—	—	—	—	—	—	3	0	3
(B)	0	0	0	16	3	19	1	—	1	—	—	—	17	3	20
TOTAL	6	4	10	104	56	160	1	3	4	3	1	4	114	64	178

(c) DEATH RATES PER 1,000 POPULATION PER ANNUM

EUROPEAN	0.44
MINING NATIVES	0.39
NON-MINING NATIVES	6.73
COLOURED	2.00
INDIAN	3.92
ALL NON-EUROPEAN	2.87
ALL RACES	2.19

ENTERIC FEVER

(a) NOTIFICATIONS: DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	9	3	12	0	2	2	—	—	—	—	—	—	9	5	14
Location	—	—	—	11	6	17	—	—	—	—	—	—	11	6	17
Semi-Rural Areas	0	1	1	2	1	3	—	—	—	—	—	—	2	2	4
(A)	9	4	13	13	9	22	—	—	—	—	—	—	22	13	35
New Kleinfontein	—	—	—	9	0	9	—	—	—	—	—	—	9	0	9
Van Ryn Estates	—	—	—	5	0	5	—	—	—	—	—	—	5	0	5
Modder B	—	—	—	0	1	1	—	—	—	—	—	—	0	1	1
Modder Deep	—	—	—	4	0	4	—	—	—	—	—	—	4	0	4
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
New Modder	0	1	1	8	0	8	—	—	—	—	—	—	8	1	9
Van Ryn Deep	—	—	—	4	0	4	—	—	—	—	—	—	4	0	4
(B)	0	1	1	30	1	31	—	—	—	—	—	—	30	2	32
TOTAL	9	5	14	43	10	53	—	—	—	—	—	—	52	15	67

(b) DEATHS: DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	3	0	3	—	—	—	—	—	—	—	—	—	3	0	3
Location	—	—	—	7	0	7	—	—	—	—	—	—	7	0	7
Semi-Rural Areas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(A)	3	0	3	7	0	7	—	—	—	—	—	—	10	0	10
New Kleinfontein	—	—	—	3	—	3	—	—	—	—	—	—	3	0	3
Van Ryn Estates	—	—	—	1	—	1	—	—	—	—	—	—	1	0	1
Modder B	—	—	—	1	—	1	—	—	—	—	—	—	1	0	1
Modder Deep	—	—	—	1	—	1	—	—	—	—	—	—	1	0	1
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0
New Modder	—	—	—	3	—	3	—	—	—	—	—	—	3	0	3
Van Ryn Deep	—	—	—	3	—	3	—	—	—	—	—	—	3	0	3
(B)	—	—	—	12	—	12	—	—	—	—	—	—	12	0	12
TOTAL	3	—	3	19	—	19	—	—	—	—	—	—	22	0	22

(c) INCIDENCE AND DEATH RATES

	INCIDENCE RATES (Notifications per 1,000 population)	DEATH RATES (Deaths per 1,000 population)	CASE MORTALITY RATES (Deaths per 100 cases)
EUROPEANS	0·62	0·13	21·4
NATIVES—MINES	0·89	0·33	40·0
NATIVES—NON-MINES	1·05	0·37	30·4
COLOURED	0·00	0·00	0·0
INDIANS	0·00	0·00	0·0
ALL NON-EUROPEANS	0·91	0·33	35·8
ALL RACES	0·82	0·27	32·8

DIARRHOEA AND ENTERITIS

(Under 2 years)

(a) TOTAL DEATHS IN MONTHS

	EURO- PEAN			MIN. NAT.	NON-MIN. NATIVES			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	MALES	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
July	—	—	—	—	1	—	1	—	—	—	—	—	—	1	0	1
August	—	—	—	—	1	—	1	—	—	—	—	—	—	1	0	1
September	—	—	—	—	1	2	3	—	—	—	—	—	—	1	2	3
October	—	—	—	—	2	1	3	—	—	—	—	—	—	2	1	3
November	1	0	1	—	16	8	24	—	—	—	1	—	1	18	8	26
December	1	2	3	—	14	12	26	—	1	1	1	—	1	16	15	31
January	0	1	1	—	10	10	20	—	1	1	—	—	—	10	12	22
February	—	—	—	—	12	14	26	—	—	—	—	—	—	12	14	26
March	—	—	—	—	14	3	17	1	—	1	—	—	—	15	3	18
April	—	—	—	—	4	0	4	—	—	—	—	—	—	4	0	4
May	—	—	—	—	0	1	1	—	—	—	—	—	—	0	1	1
June	—	—	—	—	0	1	1	—	—	—	—	1	1	0	2	2
TOTAL	2	3	5	—	75	52	127	1	2	3	2	1	3	80	58	138

(b) TOTAL DEATHS IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	0	2	2	1	1	2	—	—	—	—	—	—	1	3	4
Location	—	—	—	72	48	120	0	2	2	2	1	3	74	51	125
Semi-Rural Areas	2	1	3	0	0	0	—	—	—	—	—	—	2	1	3
(A)	2	3	5	73	49	122	0	2	2	2	1	3	77	55	132
New Kleinfontein	—	—	—	1	1	2	—	—	—	—	—	—	1	1	2
Van Ryn Estates	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Modder B	—	—	—	1	1	2	—	—	—	—	—	—	1	1	2
Modder Deep	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Modder	—	—	—	—	1	1	1	—	1	—	—	—	1	1	2
Van Ryn Deep	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(B)	—	—	—	2	3	5	1	—	1	—	—	—	3	3	6
TOTAL	2	3	5	75	52	127	1	2	3	2	1	3	80	58	138

(c) DEATH RATES PER 1,000 POPULATION
PER ANNUM

EUROPEAN	0.22
MINING NATIVES	—
NON-MINING NATIVES	5.82
COLOURED	1.50
INDIAN	2.94
ALL NON-EUROPEAN	2.27
ALL RACES	1.70

CANCER

(a) TOTAL DEATHS: IN ORGANS AFFECTED

	EURO- PEAN			NATIVES				COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	MINES MALES	NON-MINES			M.	F.	T.	M.	F.	T.	M.	F.	T.
Stomach	—	—	—	—	—	—	—	—	—	—	1	—	1	1	0	1
Liver	2	1	3	—	—	—	—	—	—	—	—	—	—	2	1	3
Pancreas	1	—	1	—	—	—	—	—	—	—	—	—	—	1	0	1
Large Bowel	1	1	2	—	—	—	—	—	—	—	—	—	—	1	1	2
Uterus	—	—	—	—	—	1	1	—	—	—	—	—	—	—	1	1
Cervix	—	—	—	—	—	—	—	—	1	1	—	—	—	—	1	1
Ovary	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Breast	—	2	2	—	—	—	—	—	—	—	—	—	—	—	2	2
Prostate	—	—	—	1	1	—	1	1	—	1	—	—	—	3	—	3
Lip	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1
Sarcoma of Jaw	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1
Cerebral Tumour	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	1
TOTAL	6	6	12	1	1	1	2	1	1	2	1	0	1	10	8	18

(b) TOTAL DEATHS: IN GROUPS

	EURO- PEAN			NATIVE				COL- OURED			INDIAN			TOTAL		
	M.	F.	T.	MINES MALES	NON-MINES			M.	F.	T.	M.	F.	T.	M.	F.	T.
0-24	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	0
25-44	1	0	1	1	—	1	1	—	—	—	1	—	1	3	1	4
45-64	4	5	9	—	—	—	—	—	1	1	—	—	—	4	6	10
65 up	1	1	2	—	1	—	1	1	—	1	—	—	—	3	1	4
TOTAL	6	6	12	1	1	1	2	1	1	2	1	0	1	10	8	18

(c) DEATH RATES PER 1,000 POPULATION PER ANNUM

EUROPEAN	0.53
MINING NATIVES	0.03
NON-MINING NATIVES	0.09
COLOURED	1.00
INDIAN	0.98
ALL NON-EUROPEAN	0.10
ALL RACES	0.22

MEASLES

(a) NOTIFICATIONS: IN MONTHS

	EURO- PEAN			MINING NATIVES	NON- MINING NATIVES			COL- OURED			INDIAN			TOTAL		
	M.	F.	T.		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
July	7	5	12	1	—	—	—	—	—	—	—	—	—	8	5	13
August	10	6	16	4	—	1	1	—	—	—	—	—	—	14	7	21
September	32	38	70	8	4	—	4	—	—	—	—	—	—	44	38	82
October	27	27	54	13	1	2	3	—	—	—	—	—	—	41	29	70
November	12	9	21	13	4	2	6	—	—	—	—	—	—	29	11	40
December	4	4	8	10	1	2	3	—	—	—	—	—	—	15	6	21
January	—	—	—	28	—	—	—	—	—	—	—	—	—	28	—	28
February	2	1	3	6	—	—	—	3	—	3	—	—	—	11	1	12
March	3	—	3	13	3	2	5	1	3	4	—	1	1	20	6	26
April	2	2	4	16	2	2	4	1	—	1	—	—	—	21	4	25
May	2	—	2	20	4	—	4	—	—	—	—	—	—	26	—	26
June	9	—	9	8	1	1	2	—	—	—	—	—	—	18	1	19
TOTAL	110	92	202	140	20	12	32	5	3	8	—	1	1	275	108	383

(b) NOTIFICATIONS: IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township : Proper... ..	70	68	138	—	—	—	—	—	—	—	—	—	70	68	138
Northmead	17	8	25	—	—	—	—	—	—	—	—	—	17	8	25
Westdene	3	2	5	—	—	—	—	—	—	—	—	—	3	2	5
Township	90	78	168	—	—	—	—	—	—	—	—	—	90	78	168
Location	—	—	—	19	12	31	5	3	8	—	1	1	24	16	40
Semi-Rural Areas	4	2	6	—	—	—	—	—	—	—	—	—	4	2	6
(A)	94	80	174	19	12	31	5	3	8	—	1	1	118	96	214
New Kleinfontein	3	5	8	23	—	23	—	—	—	—	—	—	26	5	31
Van Ryn Estates	3	4	7	22	—	22	—	—	—	—	—	—	24	4	29
Modder B	7	—	7	12	—	12	—	—	—	—	—	—	19	—	19
Modder Deep	—	—	—	1	—	1	—	—	—	—	—	—	1	—	1
Modder East	1	1	2	—	—	—	—	—	—	—	—	—	1	1	2
New Modder	2	1	3	64	—	64	—	—	—	—	—	—	66	1	67
Van Ryn Deep	—	1	1	19	—	19	—	—	—	—	—	—	19	1	20
(B)	16	12	28	141	—	141	—	—	—	—	—	—	157	12	169
TOTAL	110	92	202	160	12	172	5	3	8	—	1	1	275	108	383

(c) NOTIFICATION: IN AGE GROUPS

YEARS	EURO- PEAN			MINING NATIVES	NON- MINING NATIVES			COL- OURED			INDIAN			TOTAL		
	M.	F.	T.		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
0	3	1	4	—	—	2	2	—	—	—	—	—	—	3	3	6
1	6	4	10	—	2	3	5	1	—	1	—	1	1	9	8	17
2	4	10	14	—	5	3	8	—	—	—	—	—	—	9	13	22
3	5	6	11	—	1	—	1	—	—	—	—	—	—	6	6	12
4	10	5	15	—	2	2	4	1	—	1	—	—	—	13	7	20
5-9	54	47	101	—	7	2	9	3	2	5	—	—	—	64	51	115
10-14	4	10	14	—	—	—	—	—	1	1	—	—	—	4	11	15
15-19	9	3	12	23	1	—	1	—	—	—	—	—	—	33	3	36
20-24	11	1	12	55	—	—	—	—	—	—	—	—	—	66	1	67
25-up	4	5	9	62	2	—	2	—	—	—	—	—	—	68	5	73
TOTAL	110	92	202	140	20	12	32	5	3	8	—	1	1	275	108	383

(d) INCIDENCE AND DEATH RATES

	INCIDENCE RATES (Notifeation per 1,000 Population)			DEATH RATES (Deaths per 1,000 Population)		
EUROPEAN			8.97			—
MINING NATIVES			4.16			—
NON-MINING NATIVES			1.47			0.09
COLOURED			4.01			—
INDIAN			0.98			—
ALL NON-EUROPEAN			3.10			0.03
ALL RACES			4.71			0.02

N.B.—NOTIFICATION is made only of the first case occurring (within 28 days) in a household or native compound room.

CEREBRO-SPINAL MENINGITIS

(a) NOTIFICATIONS: IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	3	—	3	—	1	1	—	—	—	—	—	—	3	1	4
Location	—	—	—	2	—	2	—	—	—	—	—	—	2	0	2
Semi-Rural Areas	1	—	1	—	—	—	—	—	—	—	—	—	1	—	1
(A)	4	—	4	2	1	3	—	—	—	—	—	—	6	1	7
New Kleinfontein	—	—	—	4	—	4	—	—	—	—	—	—	4	—	4
Van Ryn Estates	—	—	—	3	—	3	—	—	—	—	—	—	3	—	3
Modder B	3	—	3	1	—	1	1	—	1	—	—	—	5	—	5
Modder Deep	—	—	—	2	—	2	—	—	—	—	—	—	2	—	2
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	0	—	0
New Modder	—	—	—	7	—	7	—	—	—	—	—	—	7	—	7
Van Ryn Deep	—	—	—	4	—	4	—	—	—	—	—	—	4	—	4
(B)	3	—	3	21	—	21	1	—	1	—	—	—	25	—	25
TOTAL	7	—	7	23	1	24	1	—	1	—	—	—	31	1	32

(b) DEATHS: IN AGE GROUPS

				EURO- PEAN			NATIVES			COL- OURED			INDIAN			ALL RACES		
				M.	F.	T.	MINES MALES	NON-MINES		M.	F.	T.	M.	F.	T.	M.	F.	T.
								M.	F.									
0- 9	...	...	...	1	—	1	—	—	—	—	—	—	—	—	—	1	—	1
10-14	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15-19	...	...	...	—	—	—	1	—	—	—	—	—	—	—	—	1	—	1
20-24	...	...	...	—	—	—	3	—	—	—	—	—	—	—	—	3	—	3
25 up	...	...	...	—	—	—	3	—	—	—	—	—	—	—	—	3	—	3
TOTAL				1	—	1	7	—	—	—	—	—	—	—	—	8	—	8

(c) INCIDENCE AND DEATH RATES

(c)	INCIDENCE RATES (Notifications per 1,000 population)	DEATH RATES (Deaths per 1,000 population)	CASE MORTALITY RATES (Deaths per 100 cases)
EUROPEANS	0·31	0·04	14%
NATIVES—MINES	0·62	0·21	33%
NATIVES—NON-MINES	0·14	0·00	—
COLOURED	0·50	0·00	—
INDIAN	0·00	0·00	—
ALL NON-EUROPEANS	0·43	0·12	28%
ALL RACES	0·39	0·10	25%

VIOLENCE

(a) TOTAL DEATHS: CAUSES

	EURO- PEAN			NATIVES				COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	MINES MALES	NON-MINES			M.	F.	T.	M.	F.	T.	M.	F.	T.
Sulcide	1	—	1	2	—	—	—	—	1	1	—	—	—	3	1	4
Infanticide	—	—	—	0	1	—	1	—	—	—	—	—	—	1	—	1
Homicide	1	—	1	3	1	—	1	—	—	—	—	—	—	5	—	5
Acid Poisoning ...	1	—	1	0	—	1	1	—	—	—	—	—	—	1	1	2
Burns	2	—	2	1	—	4	4	—	1	1	—	—	—	3	5	8
Drowning	1	—	1	0	—	—	—	—	—	—	—	1	1	1	1	2
Mine Accidents ...	3	—	3	44	—	—	—	—	—	—	—	—	—	47	—	47
Rail Accidents ...	—	—	—	2	—	1	1	—	—	—	—	—	—	2	1	3
Road Accidents	4	1	5	4	4	1	5	—	—	—	1	—	1	13	2	15
Other accidents...	1	—	1	1	1	—	1	1	—	1	—	—	—	4	—	4
Electricity	—	1	1	0	—	—	0	1	—	1	—	—	—	1	1	2
TOTAL	14	2	16	57	7	7	14	2	2	4	1	1	2	81	12	93

(b) TOTAL DEATHS: IN DISTRICTS

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			ALL RACES		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Township	12	2	14	2	3	5	2	—	2	—	—	—	16	5	21
Location	—	—	—	3	3	6	—	2	2	1	—	1	4	5	9
Semi-Rural Areas	1	—	1	2	1	3	—	—	—	—	—	—	3	1	4
(A)	13	2	15	7	7	14	2	2	4	1	—	1	23	11	34
New Kleinfontein	—	—	—	13	—	13	—	—	—	—	—	—	13	—	13
Van Ryn Estates	1	—	1	3	—	3	—	—	—	—	—	—	4	—	4
Modder B	—	—	—	5	—	5	—	—	—	—	—	—	5	—	5
Modder Deep	—	—	—	2	—	2	—	—	—	—	—	—	2	—	2
Modder East	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New Modder	—	—	—	20	—	20	—	—	—	—	1	1	20	1	21
Van Ryn Deep	—	—	—	14	—	14	—	—	—	—	—	—	14	—	14
(B)	1	—	1	57	—	57	—	—	—	—	1	1	58	1	59
TOTAL	14	2	16	64	7	71	2	2	4	1	1	2	81	12	93

(c) DEATH RATES PER 1,000 POPULATION

	SUICIDE	HOMICIDE	ROAD ACCIDENTS	MINE ACCIDENTS	OTHER VIOLENCE	TOTAL
European	0·04	0·04	0·22	0·13	0·22	0·65
Native—Mines	0·06	0·09	0·12	1·31	0·12	1·70
Native—Non-Mines...	—	0·09	0·23	—	0·32	0·64
Coloured	0·50	—	—	—	1·50	2·00
Indian	—	—	0·98	—	0·98	1·96
All Non-European ...	0·05	0·09	0·17	0·75	0·26	1·32
All Races	0·05	0·07	0·18	0·58	0·25	1·13

NOTIFICATIONS OF INFECTIOUS DISEASE

	EURO-PEAN			MINING NATIVES	NON-MINING NATIVES			COL-oured			INDIAN			TOTAL		
	M.	F.	T.		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Enteric Fever (all)...	9	5	14	30	13	10	23	—	—	—	—	—	—	52	15	67
Enteric Fever ...	—	1	1	8	1	2	3	—	—	—	—	—	—	9	3	12
(Imported Cases) ...	4	2	6	52	21	9	40	3	1	4	1	—	1	81	22	103
Pulm. Tuberculosis	—	—	—	2	—	—	—	—	—	—	—	—	—	2	—	2
Non-Pulm. „	110	92	202	140	20	12	32	5	3	8	—	1	1	275	108	383
Measles	13	10	23	—	—	1	1	—	1	1	—	—	—	13	12	25
Whooping Cough ...	5	9	14	—	—	—	—	—	—	—	—	—	—	5	9	14
Scarlet Fever	7	—	7	21	2	1	3	1	—	1	—	—	—	31	1	32
C. S. Meningitis ...	6	5	11	8	—	2	2	—	—	—	—	—	—	14	7	21
Erysipelas	—	4	4	—	—	5	5	—	—	—	—	1	1	—	10	10
Puerperal Fever ...	—	—	—	—	1	3	4	—	—	—	—	—	—	1	3	4
Ophth. Neonatorum	—	4	4	1	1	—	1	—	—	—	1	—	1	3	4	7
Diphtheria	—	—	—	—	—	1	1	—	—	—	—	—	—	—	1	1
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Leprosy	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1
Antr. Poliomyelitis	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	1
Tick Typhus Fever	1	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1
Flea Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

REMOVALS TO HOSPITAL: INFECTIOUS DISEASES

I.—BOKSBURG-BENONI HOSPITAL

	EURO-PEAN	MINING NATIVES	NON-MINING NATIVES	COL-oured	INDIAN	ALL RACES
Pulmonary Tuberculosis ...	1	—	23	1	—	25
Enteric Fever	8	—	19	—	—	27
Erysipelas	6	—	2	—	—	8
Measles	8	—	1	1	—	10
Cerebro-Spinal Meningitis	6	—	3	—	—	9
Puerperal Fever	2	—	5	—	—	7
Diphtheria	—	—	—	—	1	1
Scarlet Fever	7	—	—	—	—	7
Typhus Fever	1	—	—	—	—	1
Ophth. Neonatorum ...	—	—	1	—	—	1
TOTAL	39	—	54	2	1	96

II.—MINE NATIVE HOSPITALS

	EURO-PEAN	MINING NATIVES	NON-MINING NATIVES	COL-oured	INDIAN	ALL RACES
Pulmonary Tubereulosis...	—	50	—	—	—	50
Non.Pulmonary „ ...	—	3	—	—	—	3
Enteric Fever	—	27	1	—	—	28
Erysipelas	—	7	—	—	—	7
Measles	—	140	—	—	—	140
Cerebro-Spinal Meningitis	—	20	—	1	—	21
Diphtheria	—	1	—	—	—	1
Leprosy	—	1	—	1	—	2
TOTAL	—	249	1	2	—	252

III.—PRIVATE NURSING HOMES AND HOSPITALS

	EURO- PEAN	MINING NATIVES	NON- MINING NATIVES	COL- OURED	INDIAN	TOTAL
Pulmonary Tuberculosis...	1	—	—	—	—	1
Enteric Fever	5	—	—	—	—	5
Erysipelas	1	—	—	—	—	1
Measles	1	—	—	—	—	1
Puerperal Fever	1	—	—	—	—	1
Typhus Fever	1	—	—	—	—	1
TOTAL	10	—	—	—	—	10

IV.—SPRINGKELL AND RIETFONTAIN
TUBERCULOSIS HOSPITALS

	EURO- PEAN	MINING NATIVES	NON- MINING NATIVES	COL- OURED	INDIAN	ALL RACES
Pulmonary Tuberculosis...	2	—	6	—	—	8

V.—LEPER INSTITUTION

	EURO- PEAN	MINING NATIVES	NON- MINING NATIVES	COL- OURED	INDIAN	TOTAL
Leprosy	—	—	1	—	—	1

VI.—RIETFONTAIN ISOLATION HOSPITAL

	EURO- PEAN	MINING NATIVES	NON- MINING NATIVES	COL- OURED	INDIAN	ALL RACES
Syphilis	8	—	111	1	—	120
Syphilis and Gonorrhoea	—	—	2	—	—	2
Gonorrhoea	8	—	26	1	—	35
Gonorrhoeal Ophthalmia ...	—	—	2	—	—	2
Chickenpox	—	—	4	—	—	4
Smallpox	—	—	1	—	—	1
Smallpox Contacts	—	—	13	—	—	13
Erysipelas	—	—	1	—	—	1
Ulc. Molle.	—	—	1	1	—	2
Measles	—	—	1	—	—	1
TOTAL	16	—	162	3	—	181

MATERNITY AND CHILD WELFARE

(a) INFANT AND ANTE-NATAL CLINICS

(i.) July, 1937—March, 1938 (inclusive)

	EUROPEAN		NATIVE	COL- OURED	INDIAN	TOTAL
	Town	Northm'd				
<i>Infant Clinics:</i>						
New Cases	91	—	—	—	—	91
Total attendance ...	950	—	—	—	—	950
<i>Ante-Natal Clinics:</i>						
New Cases	—	—	—	—	—	—
Total attendance ...	—	—	—	—	—	—

(ii.) April—June, 1938 (inclusive)

	EUROPEAN		NATIVE	COL- OURED	INDIAN	TOTAL
	Town	Northm'd				
<i>Infant Clinics:</i>						
New Cases	31	20	74	24	3	152
Total attendance ...	349	77	206	57	17	706
<i>Ante-Natal Clinics:</i>						
New Cases	8	5	44	15	2	74
Total attendance ...	17	7	93	35	3	155

(b) HOME VISITS, ETC.

	EUROPEAN	NATIVE	COLOURED	INDIAN	ALL RACES
First visits	466	287	47	1	801
Re-visits	1,817	2,880	825	11	5,533
Ante-Natal visits ...	57	410	62	4	533
Protected Infants ...	10	3	2	—	15
Still Births	7	13	—	—	20
Infantile Mortality ...	9	213	6	3	231
Infectious Diseases ...	137	5	—	3	145
Special Investigations ...	24	—	—	—	24
Midwives' bag inspections	85	4	—	—	89
Nursing Homes	15	—	—	—	15
Shops	142	—	—	—	142
Children's Aid	7	—	—	—	7
Nutrition survey	26	—	—	—	26
Crippled Children	25	—	—	—	25
Schools	3	—	—	—	3
TOTAL VISITS	2,830	3,815	942	22	7,609
Confinements—Cases—*	—	79	2	—	81
Visits	—	762	22	—	784

* Confinements attended up to April, 1938, only. After this date the District Midwifery Service was undertaken by the Benoni-Boksburg Hospital.

VENEREAL DISEASE : LOCATION
 CLINICS

(July, 1937—March, 1938)

Total injections (syphilis) given (9 months):—2,140.

Total of persons attending monthly:—

	NATIVE		COLOURED		INDIAN		TOTAL
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
Children	80	93	21	23	—	—	217
Adults	61	499	8	18	—	5	591
TOTAL	141	592	29	41	—	5	808

VENEREAL DISEASE : ALL CLINICS
 (April—June, 1938)

	EURO- PEAN			NATIVE			COL- OURED			INDIAN			TOTAL		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
<i>New Cases:</i>															
Syphilis, i and ii ...	4	—	4	8	7	15	1	2	3	1	—	1	14	9	23
Syphilis, iii	2	1	3	50	55	105	3	2	5	—	—	—	55	58	113
Neurosyphilis	—	—	—	1	—	1	—	—	—	—	—	—	1	—	1
Congenital Syphilis ...	—	—	—	7	8	16	—	—	—	—	—	—	7	9	16
Total Syphilis	6	1	6	66	71	137	4	4	8	1	—	1	77	76	153
Gonorrhoea	6	3	9	2	2	4	—	—	—	—	—	—	8	5	13
Total V.D.	12	4	16	68	73	141	4	4	8	1	—	1	85	81	166
Awaiting Diag., June 30	—	2	2	28	15	43	—	—	—	—	—	—	28	17	45
Non-V.D.	1	7	8	83	61	144	2	16	18	—	3	3	86	87	173
Total Individual New Cases	13	13	26	179	149	328	6	20	26	1	3	4	199	185	384
<i>Attendances:</i>															
Syphilis, i and ii ...	20	—	20	53	283	336	3	13	16	3	—	3	79	296	375
Syphilis, iii	7	1	8	187	395	582	13	9	22	—	—	—	207	405	612
Neurosyphilis	—	—	—	12	—	12	—	—	—	—	—	—	12	—	12
Congenital Syphilis ...	—	—	—	27	68	95	—	—	—	—	—	—	27	68	95
Total Syphilis	27	1	28	279	746	1,025	16	22	38	3	—	3	325	769	1,094
Gonorrhoea	23	14	37	3	4	7	—	—	—	—	—	—	26	18	44
Total V.D.	50	16	65	282	750	1,032	16	22	38	3	—	3	351	787	1,138
Awaiting Diag., June 30	—	2	2	28	15	43	2	1	3	—	—	—	30	18	48
Non-V.D.	1	10	11	103	62	165	3	17	20	—	3	3	107	92	199
N.A.B. Injections ...	24	2	26	211	711	922	15	9	34	—	—	—	250	732	982
Vaccine Injections ...	15	8	23	1	—	1	—	—	—	—	—	—	16	8	24

BOKSBURG-BENONI HOSPITAL OUT-PATIENTS DEPARTMENT

	EUROPEANS		NON-EUROPEANS		PATIENTS
	PATIENTS	ATTENDANCES	PATIENTS	ATTENDANCES	
July	68	105	747	974	1,079
August	150	189	936	1,018	1,207
September	135	174	851	1,146	1,320
October	140	185	963	1,348	1,533
November	86	135	879	1,191	1,326
December	117	124	500	659	783
January	157	198	711	795	993
February	93	101	685	691	792
March	129	141	866	1,019	1,160
April	79	131	690	899	1,030
May	43	116	327	973	1,089
June	54	112	781	1,122	1,234
TOTAL	1,251	1,711	8,936	11,835	13,546

BOKSBURG-BENONI HOSPITAL DISTRICT MIDWIFERY SERVICE (Starting on April 1st, 1938). CONFINEMENTS ATTENDED

	EUROPEAN	NATIVE	COLOURED	INDIAN	TOTAL
April	—	3	—	—	3
May	3	8	1	—	11
June	2	2	2	—	6
TOTAL	5	13	3	—	20

ROUTINE SANITATION AND HEALTH INSPECTIONS

Notices served	952
Reports for Transmission to other Departments:—	
1. Town Engineer's Department—	
Stopped Drains	11
Unauthorised Structures	54
Undrained Premises	5
Structural defects in Premises	20
Building Plans (a) Approved	348
(b) Approved subject to alteration	117
Drainage Plans (a) Approved	624
(b) Approved subject to alteration	68
2. Native Housing—Urban Areas Act:—	
A. Premises Approved	22
B. Alterations required to Premises	25
C. Major Alterations required	6
D. Premises unfit for human habitation	12
3. Licence Department:—	
Applications approved without comment	864
Applications approved subject to conditions	4
Applications not in order	216
Applications withdrawn	14
Licences and Permits—Dairies and Milkshops	70
Building Plans, Location—Approved and Prepared	96
Visits in connection with Infectious Disease	788

Visits to Premises under Cyanide Fumigation	709
Visits to Premises re Rodents (other than by Rat Catcher) ...	71
Visits to Premises re Vermin	503
Aerated Water Manufacturers	24
Butcher Shops	1,188
Butcher Carts and Carriers	4
Baker Shops (without Bakehouse)	18
Bakehouses	142
Bakers' Carts	143
Dealers' and General Dealers' Shops (Food)	2,361
Dealers' and General Dealers' Shops (No Food)	774
Dairy Stables and Dairies	154
Milkshops and Purveyors of Milk	214
Ice Cream Purveyors and Manufacturers	8
Ice Cream Carts	8
Fish and Poultry Shops	80
Municipal Market	149
Teashops, Cafes, Eating-Houses and Restaurants	737
Kaffir-Eating Houses	928
Sweeteries	13
Cattle Dealers' Premises	7
Other Places where Food is Manufactured	6
Other Factories and Workshops	169
Residential Hotels and Boarding Houses	190
Hawkers' Premises	64
Hawkers' Carts	2
Pedlars' Premises	14
Pedlars' Vehicles	6
Theatres and Bioscopes	35
Billiard Saloons	1
Hairdressers	236
Laundries	31
Side Shows	11
Accumulation of Manure	40
Horse Stables	2,130
Keeping of Animals	713
Piggeries	37
Fly Complaints	13
Mosquito Complaints	45
Refuse Tips	15
Refuse: Accumulation	301
Refuse Bins: Broken, Insufficient, etc.	715
Tenement Houses	12
Wash Houses	21
Waste Water Receptacles	26
Water Closets: Dirty	48
Defective	13
Insufficient	4
Pail Closets: Dirty	49
Defective	192
Insufficient	36
Drains defective, choked, etc.	330
Courts, alleys, lanes	118
Public Sanitary Conveniences	613
Undrained Premises	5
Native Housing	670
House Inspections	5,488
Premises: Constructional Repairs	479
Stand Inspections	112
Open Ground	8
Sites and Premises re Deposited Plans	453
Disinfection of Premises	38
Visits for Widal Tests (Food Handlers)	69
Visits to Compounds: Mine	136
Private	59
Complaints	389
Special Interviews	721
Other Visits	640
TOTAL VISITS	<u>27,754</u>

MUNICIPAL ABATTOIR

	Animals Slaughtered
Oxen	28,213
Sheep	49,290
Calves	513
Pigs	1,885
TOTAL	79,901

	Income
Slaughtering Fees	4,879
Examination of Meat	663
Rents (incl. Old Abattoir) ...	449
Commission on Levies	94
Disinfection of Hides and Skins	20
Sale of By-Products	1,642
Cold Storage Fees	2,045
TOTAL INCOME	£9,792
TOTAL EXPENDITURE	£11,210

By-Products (in lbs.)

	Blood Meal	Meat Meal	Fat
Balance, 1st July, 1937	7,400	2,600	3,405
Produced, 1937 — 1938	213,200	141,600	22,220
TOTAL	220,200	144,200	25,625
Sales, 1937—1938	220,200	143,800	25,195
Stock in hand,			
30th June, 1938 ...	400	400	430

“ Measles ” and Tuberculosis:

Condemnations and Detentions

	“ MEASLES ”		TUBERCULOSIS	
	Cold Storage		Condemned	
	Total	%	Total	%
Oxen	895	3.17	73	0.25
Pigs	—	—	55	2.90
			2	0.11

“ Measly ” Carcases to Cold Storage

	Number	Weight
Local	895	479,340
Imported	526	262,300

FOODSTUFFS CONDEMNED

(From Food Shops, Municipal Market, etc.)

FRUIT AND VEGETABLES—

Avocado Pears	4 boxes
Beans (Green)	11 bags
Bringals	1 pocket
Cabbages	16 bags
Cucumbers	10 boxes
Gooseberries	22 boxes
Grape Fruit	24 pockets
Guavas	30 Cases
Lemons	15 pockets
Mangoes	10 boxes
Oranges	18 pockets
Pawpaws	2 boxes
Peaches	65 trays, 15 boxes
Pears	26 boxes, 11 baskets
Potatoes	3 bags
Strawberries	10 trays
Tomatoes	15 trays, 152 boxes

VARIOUS FRESH FOODS—

Cheese	33½ lbs., 31 pieces
Dressed Poultry	58, 1 small bag
Dressed Geese	6
Dressed Turkey	2
Eggs	25 doz.
Fish	1,898 lbs.
Smoked Fish	2 boxes
Pork	9¾ lbs.

TINNED FOODS—

Corned Beef	6 Tins
Curried Fish	14 „
Herrings in Tomato Sauce	122 „
Minced Meat	1 Tin
Peas	92 Tins
Puddings	4 „
Pickles	1 Tin
Pickled Cucumbers	31 Tins
Sauerkraut	135 „
Salmon	61 „
Sardines	207 „
Sild	12 „
Snacks	188 „
Soups	6 „
Tartan Jams	5 2 lb. Tins

FOODS, DRUGS, ETC., ACT

I.—SAMPLES FOR CHEMICAL ANALYSIS

Milk—52 samples taken.

Milk Fat above 4%	16
Milk Fat between 3.5 and 4%	19
Milk fat between 3.0 and 3.5%	14
Milk Fat below 3%	3

Other Foodstuffs—20 samples taken.

Ice Cream 11; Lemon Barley Water 1;
Mixed Coffee 2; Polony 3; Herring in
Tomato Sauce 1; Mince Meat 1; Curry
Powder 1.

5 samples of milk, 2 of ice cream, and 1 of lemon barley water were found to be adulterated.

II.—SAMPLES FOR BACTERIOLOGICAL ANALYSIS

Ice Cream.—5 samples taken.

B. Welchii present in 0.01 cc in each sample.

Milk—1 sample taken.

B. Welchii present in 0.01 cc.

Water—18 Samples taken.

Total count less than 100 organisms—6.

Total count less than 1,000 organisms—12.

B. coli present in 0.1 cc— 2.

B. coli present in 1 cc— 3.

B. coli present in 10 cc.—13.

PROSECUTIONS

LAW	OFFENCE	PENALTY
Food, Drugs and Disinfectants Act, Section	Label not properly described	Guilty—Fined £3
Food, Drugs and Disinfectants Act, Section 7 (1)	Adulterated Milk	Guilty—Fined £5
Food, Drugs and Disinfectants Act, Section 7 (1)	Adulterated Milk	Guilty—Fined £10
Food, Drugs and Disinfectants Act, Section 7 (1)	Adulterated Milk	Guilty—Fined £10
Food, Drugs and Disinfectants Act, Section 11 (b)	Adulterated Ice Cream	Guilty—Fined £2
Food, Drugs and Disinfectants Act, Section 11 (b)	Adulterated Ice Cream	Guilty—Fined £2
Bakery Bye-Laws, Section 7 (b)	Dirty Bakery Premises	Guilty—Fined £5
Bakery Bye-Laws, Section 7 (c)	Unclean Clothing	Guilty—Fined £2 10s.
Offensive Trades Bye-Laws, Section V, Act 27	Frying Fish without Licence	Guilty—Fined £5
Public Health Act, Section 129 (1)	Existence of unfit dwelling	Guilty — Ordered to commence demolition before 1.12.37 and remove material before 31.12.37.
Public Health Act, Section 129 (1)	Failing to comply with order of Court. Existence of unfit dwelling.	Guilty—Fined £5 for failing to comply with Court Order. Fined £13 5s. 0d. Daily fine of 5s. during existence of nuisance.
Abattoir Bye-Laws, Section 97	Unstamped Meat	Guilty—Fined £3
Abattoir Bye-Laws, Section 97 (b)	Unstamped Meat	Not Guilty—Discharged
Cyanide Bye-Laws, Section 5	Failing to notify intention to fumigate with Cyanide.	Guilty—Cautioned and Discharged.

LICENCE APPLICATIONS

(a) DEALERS (WHOLESALE AND RETAIL)

	Applica- tions Received	Applica- tions Approved (No Conditions)	Applica- tions Approved (After Conditions Completed)	Applica- tions Not in Order	Applica- tions With- drawn
General Dealers ...	548	426	4	113	5
Aerated Water Manu- facturers	3	3	—	—	—
Butchers	63	52	—	11	—
Boarding and Lodging Houses	27	20	—	6	1
Eating and Refresh- ment Rooms ...	59	49	—	6	4
Bakers and Millers ...	12	10	—	2	—
Hairdressers	48	35	—	13	—
Hotels-Dining Rooms	9	9	—	—	—
Hawkers	93	66	—	27	—
Fishmongers	7	6	—	1	—
Laundries	—	—	—	—	—
Fresh Produce Dealers	173	142	—	27	4
Entertainment Houses	8	5	—	3	—
Kaffir Eating Houses	38	31	—	7	—
Fumigators	10	10	—	—	—
TOTAL	1,098	864	4	216	14

(b) DAIRIES AND MILKSHOPS

	Applica- tions Received	Applica- tions Approved (No Conditions)	Applica- tions Approved (After Conditions Completed)	Applica- tions Not in Order	Applica- tions With- drawn
Registration : Dairies	22	4	14	3	1
Permits to Introduce	32	12	16	4	—
Milkshops	16	12	2	2	—
TOTAL	70	28	32	9	1

PLAGUE CONTROL

No. of Holes Treated	16,985
Amount of Cyano Gas used	812 lbs.
„ „ Poisoned Wheat used	190 lbs.
„ „ Capex Cartridges used	4 gross
„ „ Sugar used	72 lbs.
„ „ Strychnine used	24 ozs.
„ „ Paraffin used	5 galls
„ „ Soft Soap used	10 lbs.
„ „ Bird Lime used	3 tins

No. of Rodents killed—

Domestic Rats: (Ratus Ratus)	5,051
Domestic Mice: (Mus Musculus)	6,786
Gerbilles (Taterona Lobengula)	1,171
Striped Mice (Rhabdomys Pumilio)	276
Multimammate Mice	190
Malacothrix (Large Eared Mice)	17
White Tailed Rat, (Mystramys Albicaudatus)	4
Mongoose	10
	<hr/>
	13,505
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MEMORANDA

